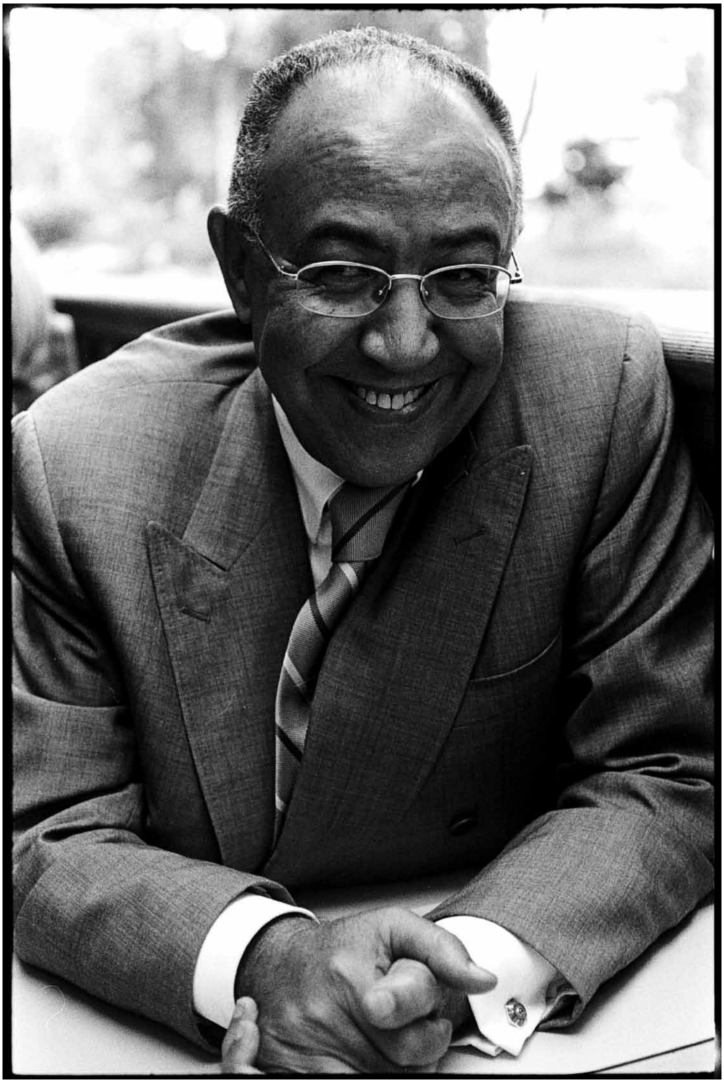
THEORIES AND SOCIAL MECHANISMS



Mohamed Cherkaoui, Paris, 2007
Photograph by Peter Hamilton

THEORIES AND SOCIAL MECHANISMS

Essays in Honour of Mohamed Cherkaoui

VOLUME II

Edited by
Gianluca Manzo

THE BARDWELL PRESS

First published 2015

Published by:

The Bardwell Press
Tithe Barn House
11 High Street, Cumnor
Oxford, OX2 9PE
United Kingdom

British Library Cataloguing in Publication Data
A catalogue record for this book is available from the British Library

ISBN: 978-1-905622-46-7 (Set of 2 volumes)

Typeset by The Bardwell Press, Oxford, UK
Printed in the United Kingdom by Berforts Information Press

CONTENTS

VOLUME II

PART FOUR
Education and Social Mobility

PART FIVE
Status Distributions

PART SIX
States and Markets

PART SEVEN
Social Movements

PART FOUR

Education and Social Mobility

18

MOHAMED CHERKAOUI[1]

His Thoughts and His Impact and Validity in Argentina

Miriam Aparicio
National Council for Scientific Research (CONICET), Argentina

Undoubtedly, the intellectual life of a person is—to a great extent—the result of meeting other people, which is a sometimes unexpected but also enriching experience. It was through Raymond Boudon, Director of the Groupe d'Etude des Méthodes de l'Analyse Sociologique de la Sorbonne (GEMASS), that I met Mohamed Cherkaoui and had an opportunity to discuss some ideas with him during my short stays in France back in the 1980s and thereafter. The impact such experience had on me was so strong that today—at this time of honouring him, I have become even more "aware" of this fact.

It is important to say that after thinking a lot about how to honour an intellectual of his stature, I decided to review his main contributions—especially those concerning the Sociology of Education, going over my own research in Argentina and unveiling his core concepts. Such research shows the presence of a personality that has influenced Sociology over the last few decades, even beyond the French-speaking world.

In an attempt to take up again some of the present validity of his most relevant concepts, I will go back to my intellectual origins, discussing the main theoretical-methodological issues, which inspired them, as well as the convergence and/or differences with empirical research that I have done in an Argentine or a Franco-Argentinian context. The topics discussed involve input and output in the teaching system, imposition, control, specialisation, selection, self-selection, identity, homogenization, anomia, representations, socio-occupational and inter-generational mobility and—underlying all of these phenomenon—socialisation.

Sociologie de l'éducation (Cherkaoui, 2004 [1986]) has some aspects in common with my first research work (1978). At the time I met Raymond Boudon and translated his work *L'inégalité des chances. La mobilité sociale dans les sociétés industrielles* (1973) into Spanish,[2] which made a strong impact on my ideas and, without a doubt, on sociology in general: unequal opportunities will, in fact, be one of the issues, which has defined the latest four decades in the field of the sociology of education. Cherkaoui took the place of Boudon at GEMASS and the ideas of both of them eventually influenced my intellectual life. The main difference between them and me may be that my research was carried out in the field in an interdisciplinary context, which involved sociology of education and social psychology, as well as *quantitative* and *qualitative* methodologies. As a result, my research eventually led to the emergence of a new disciplinary field, which I called *Social* Psychology of Education.

1. CONCERNING THE STAGES OF THINKING, THEIR "CONTEXTUALIZED" AXES OR CONCERNING THE VALIDITY OF CHERKAOUI'S IDEAS

In his *Sociologie de l'éducation*, Cherkaoui refers to variables such as representations, individuals and the expectations of their families and motivation, which he analyses from a sociological perspective and using a quantitative methodology in relation with mobility. His approach influenced my thinking, where two main periods can be distinguished:

a) the search for causes associated with inter-generation Mobility, since 1977, and b) the search for causes and "reasons" underlying university achievement (UA) and Work Achievement (WA), since 1995. The latter search includes my models of psycho-social factors (beliefs, representations, motivation, alignment and need achievement, among others), which takes into account socio-cultural as well as pedagogical-institutional and structural variables.

Mobility, together with university achievement (UA) and work achievement (WA) will become the "hard core" of Cherkaoui's work and my own. *Mobility* was already an important issue as far back as the last decades of the last century; an importance that would be overshadowed later by the problem of obtaining work under the economic crises hitting a globalized world (Dubar, 2000).[3]

University achievement and *work achievement* (UA and WA) address one of the most prolific research domains in the field of education and work, as well as related problems such as diploma devaluation, career stagnation and either "externally or self-imposed" barriers to prevent achievement.

Let us discuss these two main points—mobility and achievement—first, so as to later focus on other *transverse axes* present both in Cherkaoui and in my own work.

1.1. Mobility, Anomia and Inconsistency of Status

In the 1970s, sociology appeared rather as a function: unveiling the keys to social change, as Cherkaoui pointed out (2004 [1986]). In such a context, education was the propeller of mobility and development. On the other hand, deterministic theories considered that social origin was a sort of destiny: every single position was explained considering previous facts; namely, school contributes to social reproduction. Bernstein (1965) explained UA in terms of linguistic codes; Bourdieu and Passeron (1970) in terms of the plotting (of the dominant class). Boudon—in terms of methodological individualism—eventually proved that the democratisation of teaching did not influence mobility or income to the extent that was expected. The myth of education, as a factor of progress, began to fade away.[4] Two factors—social origin and decision factors; namely, the axis of the two great paradigms: determinist and interactionist—are at the core of the problem: necessity or "limited freedom"? (Cherkaoui, 1974; 1979.)

The question was an important one: decision factors made escaping the fatalism of origin possible. Causality changed. The socio-occupational future of an individual would no longer be determined by the past alone. Cherkaoui (2004 [1986]) called this "circular causality".

Within that framework in Argentina, some questions arose: What were the factors underlying educational and professional mobility? What was the role of education in different generations? What factors could mitigate unequal opportunities? Argentina had received a large number of immigrants at the beginning of the 20th century. This fact was accompanied by great mobility. However, as some findings reveal, not every aspect of this phenomenon was positive. There were also some negative aspects due to structural limits, especially in the 1990s. One such negative aspect was inconsistency in the configuration of the ethnic-educational-working status among immigrants. This inconsistency extended to following generations, nevertheless, bearing some different features (Hollinsghead, Ellis & Kirb, 1954; Heintz, 1965; Burke, 1965; Benoit-Smullyan, 1969; Jackson, 1962; Lensky, 1954.) Such inconsistency was translated into anomia and both variables related, in turn, to socio-cultural "unrootedness" (Theory of Cultural Conflict, Thomas & Znaniecki, 1974, [1918].)

The data I gathered from three generations in Argentina provided a chance to put the hypotheses related to the dominant paradigms to the test and recovered core variables in the Cherkaoui's theory. I specifically refer to the theory of reproduction and the theory of n-achievement, which links almost in a linear way high expectations and social mobility (McClelland, 1961). Such relation was weakened in times of crisis, when expectations did not really predict academic or professional achievement, nor social mobility (Aparicio, 1981; 2005).

Other hypotheses tested are associated with determinism and the reproduction of social structure from *habitus*, where social origin is linked to socio-occupational destiny (Bourdieu & Passeron, 1970). Therefore, the question leading my research was: What is the role of social origin concerning inter-generational, educational and working mobility in a society?

My research was based on the analysis of macro–meso–micro relationships concerning the problem in question.

1.2. Assessment of university quality in relation to university and work achievement

Mechanisms for institutional assessment were one of the axes in Cherkaoui's work. That axis was also included in my own work, incorporating input and output, considered indicators of university quality and of the working world, mediated by psycho-social processes.

The quality of both systems began to be a political priority in the 1980s and in Argentina it started in 1995. Measurement of output, however, was and still is expressed through figures (dropout and graduation rates, etc.), thereby leaving in the "black box" the processes underlying such figures (Bautier, Crinon, Rayou & Rochex, 2006). Career social mobility is a part of such output, leitmotiv of my research work. The models involved will include input, output and *common* and *differential processes*, depending upon the specific objective of each complementary study.

We are now going to discuss some transverse topics emerging from different research work, which were included in my research concerning academic and professional achievement (UA and WA) among a population of graduates (20 cohorts, Cuyo University) and delayed subjects (Technological University, 17 cohorts): a) homogenization, identity and socialisation; and b) consumption/investment and the cost/benefit models.

2. TRANSVERSE AXES OF RESEARCH: ACADEMIC ENVIRONMENT, TIMING, IDENTITIES AND THE INFLUENCE CHERKAOUI'S IDEAS

Here are some of the questions which guided my research: What are the pedagogical-institutional and psycho-social processes that explain UA? What is the role of the main systems of belief, of ideology (alignment), of respect and communication among teachers and students, of "social" competence, of perseverance, of tolerance and of engagement? (Kuh & Hu, 2001; Halpin, 1990; Pascarella, 2001; Pascarella & Terenzini, 1991, 2005; Tinto, 1975; 1998). Are there specific typologies of problems in each department or even study programme? In other words is there a "problem profile", which ensures a certain homogenization in each institution?

This is what the research revealed:

— The convergence and divergence of values and beliefs as well as the influence of a history that links prestige, power and access to *certain* university studies and not others (Cherkaoui, 2004, [1986]; Heintz, 1970; Aparicio, 2009, vol. II)
— The validity of consumption/investment models, which are mainly linked to cultural and psycho-social variables. Subjects that, in general, study social or human sciences (SHS) do not bear high expectations concerning their professional future in terms of income, prestige or power, as they come from middle and middle-lower classes[5] (Aparicio, 2004c). The opposite is true about those that choose more difficult courses of studies, when considering their families and personal stories, their capability based on previous school achievement and their expectations of a more promissory future (investment model).[6] These consumption/investment models are, therefore, associated with different kinds of public, expectations, demands, preferences, costs, hopes and benefits
— The effects of selection mechanisms (both institutional and self-selection) on university achievement (UA); that is, an overlapping of macro, meso and micro dimensions
— Marked homogenization in the different departments, courses of study and disciplinary fields ("hard" or "soft" sciences) in relation with the aforementioned variables: values, beliefs, expectations, n-Ach.[7] The problems that appeared in the general matrix *were not present* in the answers given by subjects from *different departments*. Each college or department has its own culture
— The effects of processes connected with the "division" between study programmes and departments and the "unity" inside them. At the base of all of them are the (primary and secondary) mechanisms of socialisation (Bourdieu & Passeron, 1970)
— In general, there are *quasi* typologies belonging to each programme in the domains of the "soft" and "hard" sciences

— "Institutional homogenization" is shown by the convergence of public, values, preferences, elections, ambitions and levels of satisfaction concerning the chosen programme (Aparicio, 2005.) Our hypothesis about a marked institutional and disciplinary homogenization is proved once more by the results
— The validity of some theories, which point out the *influence* of *psycho-social factors* on *performance*, as they underlie and propel actions
— Results also show the importance of *institutions* (family, school and other educational institutions). In fact, these are not innate factors rather they are the result of socialising either in a *closer* or a *more distant environment*. A *macro meso-micro interpretation,* then, becomes necessary

As far as we are concerned, there are institutional problems inside the micro-institutions (departments, programmes) and there are cultural problems (assessment, beliefs, etc) and psycho-social problems, which affect the performance of individuals such as little communication, isolation, kinds of interaction, mutual respect and tolerance just to mention a few (Aparicio, 2009b)

All of these combine with individual problems, preferences, decisions, which account for the extension of the studying period like diseases, travelling, hobbies, which are inputs also considered by Cherkaoui (2004 [1986]).

The connection of variables is large and complex and the situation of any student cannot be explained by a single fact but rather by the combination of all of them.

3. INTERPRETATION OF RESULTS

> "*The fact that an action took place in a limited context does not mean that its behaviour is, exclusively, the consequence of its limitations. Limitations are only one of the elements, which account for an individual action*". (R. Boudon, *La logique du social* 1979: 53)[8]

The results—in the fields of sociology of education and "social" psychology of education—show the factors and qualitative dimensions (input) that made the greatest impact on the chances of success and on mobility (output.)

Two main questions orientate my summary: What are the theoretical-methodological axes emerging from the research? What are the main theoretical points emerging from such studies?

3.1. Epistemic-methodological pillars

Let us summarise some of the most significant aspects of my research which share transverse axes of Cherkaoui's work. We put hypotheses from different theories to the test:

— Sociological theories on cultural conflict/"uprootedness", anomia, groups of belonging, inconsistency of status and individual identity
— Psychological and psycho-social theories (motivational, socio-cognitive, psycho-social, attributing theories) or the psycho-social factors in the face of UA and WA
— The influence of a group of factors that stem from irreconcilable perspectives appear; namely, the interactionistic *versus* reproductivistic paradigms. The influence of factors connected with freedom without considering the limitations of context (IM) and others, such as reproductivism linked to determinism. More accurately, "*contextualized*" influence of factors was observed. Clarifying this issue has been a central point (leitmotiv). Going beyond artificial cuts in psychological or sociological factors, as well as artificial cuts in generations (grandparents, parents and children of the same families have been involved), such factors have been integrated into models approaching both paradigms.
— The results wander off into "isms": sociologism, hyper-sociologism, psychologism and look for coincidences.
— A transverse axis is the analysis of certain mechanisms—more visible or invisible—underlying the macro-micro-macro "systems", through the integration of methodologies to achieve explanation and comprehension, which reveals the deepest meaning of human actions. That enabled us to read macro data—from a *sui*

generis approach—starting at the logics of its micro components: the actors. Two strong ideas emerge: the notions of "system" and "socialisation". It is the system, particularly the *cultural system* internalised by actors—the carrier of culture and the creator of meaning—that is at the very core of my research; namely, beliefs, imaginings, expectations and values (Aparicio, 2005). This system conditions human actions but it does not determine them completely: there is always the chance to make free choices before contextual constraints.

3.2. Conclusions according to transverse axes

To conclude, let us discuss the aspects emerging from the analyses carried out. They are mainly three: socialisation, homogenization and system; the "s" from education sciences (interdisciplinary): *social* psychology of education—an *integrating* approach, which accepts new methodological strategies; the local validity of specific theories at play, when it comes to explaining or understanding achievement; the dominant roles of the cultural aspect with their common values and representations, which account for human behaviour and—in our case—the connection with achievement and mobility.

We have dealt with the latter aspects above. Let us discuss now the former: Socialisation, Selection and Self-selection, Homogenization and Identity/ies. Here is where Cherkaoui's influence on me becomes strongest.

3.2.1. Socialisation, homogenization and the system: a micro-institutional plan

Socialisation, homogenization and system are linked to the selection and self-selection processes in universities, colleges and programmes. There are "filters" both at the university and in the market (see Aparicio, 2007a; 2007b; 2009c). Let us see how some of them operate.

a) Selection by diploma and, indirectly, through the institution, which awards it with stories of prestige and power. None of the chosen studies refers to a selection operated *from* the market with more or less hidden filters but which were observed in other studies (especially, when the pre-theory of alignment was put to the test). This topic was also analysed in other studies (Aparicio, 2004b). According to selected research, the market re-appears at the time of the subjects' choice of their studies for their professional future, as well as the chances for insertion and progress which such market offers. The subjects know what the system "values most" and—according to base, socio-cultural and psycho-social variables together with and linked to what the macro contextual and institutional system offers—they choose a programme within their own constraints and possibilities. Subject, culture and society are, therefore, at play and are a "combined selection" in the words of Cherkaoui. These three dimensions were already discussed in my first publication (Aparicio, 1978) under the title *Sociedad, cultura y personalidad …* (Society, Culture and Personality …). Boudon analysed this point from the point of view of methodological individualism and Cherkaoui took it up again in his analysis of input and output in the teaching system and the author of this text, through the Society, Culture and Personality relationship with later developments.

b) There are also self-selection processes operated by the subject himself. In the end, the choice is fairly unconscious and there are other variables at play, like powerful groups, policies (oriented more and more towards technology and the "hard" sciences, which end up killing off other disciplinary fields) and the dominant epistemology.

c) "Disciplinary" selection or about discipline stratification. Here the results show that a co-occurrence of variables within the different profiles of the students/graduates, who choose "hard sciences" or "soft sciences". Again it is important to point out that, despite the co-occurrence of variables already observed in contexts other than the Argentinian one, some differences do emerge, which show the need for "contextualized analyses". Just to mention an example from Cherkaoui, in France there is an inclination to literary disciplines, even if the sciences are better paid (Cherkaoui, 2004 [1986]: 35). In Argentina, programmes like Education Sciences have almost no students, while the sciences are becoming stronger. Among the SHS, the area favoured by elites, like in France, is literature.

As I write these lines and take up again some of Cherkaoui's concepts, I recall the essence of my first publication (1978). The seed was already there and it appears today dressed up in new theoretical-methodological clothes.

Apart from figures indicating processes of selection and self-selection, I am interested in the *homogenization* present in different *types of education* and at different levels i.e. performance, skills, values and rules. Each university or college and course of study is a "micro-world". At the basis of this election and action in the frame of a discipline, socialisation and an internalised culture emerge once again in "contextualized" contexts. Thus, requirements are the priority for some of them and alignment for others. Findings revealed *invisible,* "ideological", cognitive", "social" and "professional" communities. "*Socialising is transforming*" said Cherkaoui (*Ibid*: 40).[9]

To conclude let us say that socialisation and selection are two aspects of the same reality. Generated by educational and divided in relation with others in a more or less conscious way and by working institutions, socialisation plays a "role of roles". It brings the inside of the institution together, thereby instilling or giving a certain hegemonic view. Thus, every institution is—at the same time—an instance of selection and a unifying mechanism writes Cherkaoui. Unifying homogenization and dividing selection derive from "disciplinary", "institutional" and "personal" identities. In the end both selection and self-selection derive from different kinds of public at the university and in the market. All of this influenced the careers of the subjects, as the combination of what is autobiographical and what is relational, where in our view structures "condition" but do not "determine" actors' actions (Aparicio, 2012).

Dealing now with the paradigms and theories about selection and self-selection, reproductivistic determinism will argue that individuals "unconsciously anticipate future failure" through the internalisation of structures reflected in the *habitus* of their class, which will stay for life (Bourdieu & Passeron 1970). They anticipate the sanctions reserved by institutions for those emerging from lower classes. Therefore, the individual acts *quasi* mechanically. As a result, most subjects of "his/her" class behave according to what they learned, thus, contributing to the "perpetuation" of the structure".

Inversely, interactionism and IM—in relation with self-selection processes—emphasise rational processes, even if limited, as there is a context, which imposes certain limits (Boudon, 1977, Aparicio, 2005: ch. 4). As Cherkaoui points out, "*… there is no reason to turn to the hypothesis of unconscious, mechanical action or to the internalisation of structures. There is, however, a 'calculation' of costs, risks and benefits*"[10]

The two perspectives treat causality in an opposite way. In the former, the past determines the social and working future; in the latter, there is a chance, *a life plan*, expectations, motivations, clear objectives and/or action plans for the future (attribution, motivation, activation, action control, optimism and decision-making theories are among the ones tested in our research). These factors will be associated with other socio-cultural, institutional and structural ones. The micro/macro link appears once again from our man/world integrating perspective.

3.2.2. Socialisation, homogenization and the system: a macro perspective

Let us very briefly mention the main point about socialisation, homogenization and identity at the macro level.

Education is closely connected with policies and it also derives from cultural homogenization and impacts on identity. We have discussed above the topic of immigration in the Argentina of the last century and its impact on culture and education. (*see* mobility charts in Aparicio, 1981) and the causes that led to rapid growth in the framework of national integration. The main tool for progress at that time was education. Through this brief summary, we would like to simply emphasise that education contributes to the development of the political integration and national identity of individuals, even if their ideas are different. There is a new division here. Under totalitarian policies, education creates—through inculcation—"programmed" individuals, rather than critical subjects, while the opposite is true for more open policies. *Different macro contexts, therefore, are associated with different individual and institutional identities* (Aparicio, 2012) and, once more, *socialisation* appears as the end result.

With regard to the education-job relationship or rather education, economic development and job mobility, the results showed asynchronies between educational, occupational and financial (economic) mobility for the three generations studied and an increasing weakness of education in relation with promotion and income. The situation became more difficult for graduates and finding a job was taking longer than expected ¿Deferred Gratification Pattern?[11] In addition, the results showed evidence of other problems concerning insertion and stagnation in the working world, as it affected certain ages and levels of education. Here skills or the lack of them play a role in the subject of "exclusion".

To conclude, some of the theoretical and methodological topics of Cherkaoui's work were applied in research done in a different continent, more specifically in Argentina. What has been mentioned shows some similarities and differences as well as a mix of contributions and limitations.

The limitations are set by the method and its relationship with the object; namely, the ever-complex social-human phenomenon. The contribution, perhaps, shows Cherkaoui's thoughts, which are present in some of its axes and, at the same time, "contextualized". That is, the studies carried out with the transverse axes of his research work and our own reveal the importance of looking again at the link between subjects and contexts at the macro, meso and micro levels. A subject in relation with his own world, the world of institutions, where he is inserted, and all of this conditioned by the macro social aspect.

In this sense, a "contextualized" analysis helped to show—based on empirical references (field work)—that no paradigm is "dogmatic" and that determinism stands apart from science. It also indicates that the value of a model comes from its degree of "pertinence" or adjustment to a specific, "contextualized" reality rather than from its degree of "truth". Such pertinence comes from the observed object and from the context of the research. Boudon[12] (1977: 252) wrote, "A paradigm is neither true nor false, nor realistic, nor unrealistic. It may more or less be adjusted to the phenomenon analysed". It was also observed—within the constraints of this research—that there is no *one* general theory but rather, local, "contextualized theories". In that sense, a paradigm that may be clarifying in a certain context may not be so in another. The influence of Boudon (1977) is clear in that sense. Therefore, it is important to test hypotheses conceived in other places and contexts. We worked outside Europe in a fairly different environment. Our results show that the relationships between the key variables in our models do not always follow the same direction, as those from other contexts. With regard to paradigms it is important not to confer on them a predictive value, which is not always present. Reality goes beyond methods and models. In the end constructs are necessary but not sufficient (Boudon, 1977).

Therefore, apart from the coincidences with the ideas of Cherkaoui, it is important to emphasise the concept of a "contextualized" analysis.

Other contributions were rooted in field studies with real "subjects", first-hand data and from an interdisciplinary perspective involving sociology, professional training and social psychology. They also suggest a reading of the causal inter-play of variables from a *sui generis* perspective, which integrates quantitative and qualitative methodologies in an attempt to explain and understand the already complex social and human phenomena. Such phenomena appear at the macro, institutional and micro levels but—in the end—they overlap with sometimes positive, sometimes negative effects. There is no place for linearity.

From a perspective that links the subject to his context, differences may be understood from their contexts and through "their" stories, which may influence subjects in different ways and go from the educational and working systems to the selection mechanisms that derive from identities. From such a perspective, however, the ultimate and primary actor is man. The model places man in "his/her" world, "his/her" context in a permanent inter-play, which takes us to the theory of complexity with its unique features and a "human" face.

In the case of Argentina, the findings show urgency. They suggest the re-evaluation of the parameters of quality evaluation. Quality cannot be interpreted from figures, which rarely describe the underlying processes. In our view, it is necessary to determine the factors conditioning both achievement and failure, as well as mobility, the relationship between input and output and, especially, to find out what are the underlying human processes. Only by detecting what lies behind failure and at a global level will the quality of institutions be improved. Finally, the macro, meso and micro dimensions must be "playing their part".

NOTES

1. This paper relies on Aparicio (2007b and 2009c).
2. Published by Laia (Barcelona, 1983).
3. In our research, we used data belonging to three "real" generations, which enabled us to test hypotheses and theories from different times and contexts and which were considered quasi-dogmatic. Our main objective was to discover – from an integrating perspective – those mechanisms underlying achievement and unequal opportunity. Finally, having first-hand data concerning professional careers from different populations enabled us to analyse the relationships between education and work achievement, as well as the factors, which influence such achievement.
4. Other theories emerge associates with this phenomenon: the deferred gratification pattern models (Lévy-Garboua 1976; Mingat & Rasera 1981) and the attributional models, among others (Weiner 1985; Feather & Davenport 1982; Seligman 1975).
5. Literature is the exception, as it is chosen by subjects from higher social classes.
6. Most difficulties are more frequently present in the "hard" sciences. Such overlapping of variables was observed in Engineering, Economics and to a lesser degree in Law (Aparicio 2009 a, p 83).
7. The same fact was observed in a study about the scientific system (Aparicio 2003b, 2003c.) In relation with homogenisation and institutional culture (see Aparicio 2005).
8. "Le fait que son action se déroule dans un contexte de contrainte ne signifie pas qu'on puisse faire de son comportement la conséquence exclusive de ces contraintes. Les contraintes ne sont qu'un des éléments permettant de rendre compte de l'action individuelle" (R. Boudon, *La logique du social*, 1979: 53).
9. "Idéalement, c'est transformer un individu d'un être asocial en un être social en lui inculquant des catégories de pensée et un système d'idées, de croyances, de traditions, de valeurs morales, professionnelles ou de classe, dont certaines sont irréversibles et d'autres au contraire changent en fonction de nouveaux apprentissages et des situations vécues" (Cherkaoui, *ibid:* 40).
10. "… nul besoin de recourir ici à l'hypothèse de l'action mécanique, inconsciente ou à l'intériorisation des structures. Il y aura, certes, un 'calcul' des coûts, risques et bénéfices" (*Ibid:* 58).
11. In 1990 unemployment among graduates was 0%. It went up to 22% in 2002 during the Argentinian crisis—but later decreased to 10%. On 13 March 2013 it was 92%.
12. "Un paradigme n'est ni vrai ni faux, réaliste ou irréaliste. Mais il peut être plus ou moins adapté au phénomène qu'on souhaite analyser".

REFERENCES

Aparicio, M. (1981) "Subdesarrollo: situación y perspectiva desde una teoría psicosocial", *Sociologica*, 6/7: 3–47.

—— (2003a) *Calidad y Universidad. Un estudio sobre graduados a la luz de un modelo multidimensional (1985–2002).* Mendoza: ZETA.

—— (2003b) "Stratification par disciplines dans le système scientifique, mobilité professionnelle et identité en Argentine", in Vanderberghe, C., Delobbe, N. & Karnas, G. (eds), *Evolution et développement des compétences au travail, AIPTLF*. Louvain: Presses Universitaires de Louvain, vol. 1, pp. 487–499.

—— (2003c) "Mobilité occupationnelle et satisfaction au travail au sen des organisations scientifiques argentines", in Vanderberghe, C., Delobbe, N. & Karnas, G. (eds), *Dimensions individuelles et sociales de l'investissement professionnel*. Louvain: Presses Universitaires de Louvain, vol. 2, pp. 179–189.

—— (2004a) "Réussite, exclusion et logiques associées dans le système productif anticipé par le système éducatif. Une analyse à partir du modèle consommation-investissement", in Lancry, A. & Lemoine, C. (eds), *Psychologie du Travail et Ressources Humaines*, vol. I, *La personne et ses rapports au travail*. Paris: L'Harmattan, pp. 59–63.

—— (2004b) "La psychologie de sous-emploi structurel. Une étude dans des organisations à la lumière de modèles attributionnels", in Lancry, A. & Lemoine, C. (eds.), *Psychologie du Travail et Ressources Humaines*, vol. II, *La personne et ses rapports au travail*. Paris: L'Harmattan, pp. 63–68.

—— (2004c) "El rol de las organizaciones y su relación con logro y satisfacción en universitarios. Un análisis desde el modelo 'consumo-inversión'", *Revista de Psicología Social y Personalidad*, 20(1): 1–22.

—— (2005) "Cultura institucional y 'homogeneización mental'. Un análisis de impacto en universitarios", *Interdisciplinaria*, 22(2): 115–123.

—— (2007a) "Habilitation à diriger des recherches, psychologie", *"Les facteurs psychosociaux à la base de la réussite universitaire et professionnelle: aspects psychologiques et organisationnels"*, Université Lille 3, France.

—— (2007b) *Habilitation à diriger des recherches en Sciences de l'éducation, "Du niveau macro au niveau micro"*, Université Paris X Nanterre, France.

—— (2009a) *La demora en los estudios universitarios. Causas desde una perspectiva cuantitativa*, vol. I. Mendoza: EDIUNC.

—— (2009b) *La demora en los estudios universitarios. Causas desde una perspectiva cualitativa*, vol. II. Mendoza: EDIUNC.

—— (2009c) *Les facteurs psychosociaux et la réussite universitaire et professionnelle,* ANRT. Lille: Presses de l'ANRT.

—— (2012) "Trajectoires universitaires/professionnelles et identité", in Clénet, J., Maubant, P. & Poisson, D. (eds), *Formations et professionnalisations: à l'épreuve de la complexité*, Paris, L'Harmattan.

Aparicio, M. *et al.* (1978) "Un estudio de personalidad, cultura y sociedad en adolescentes del Gran Mendoza", *Cuadernos del CIC*, 6: 35–121.

Bautier, E., Crinon, J., Rayou, P & Rochex, J-I. (2006) "Performances en littéracie, modes de faire et univers mobilisés par les élèves: analyses secondaires de l'enquête PISA 2000", *Revue Française de Pédagogie*, 157, October–November–December: 85–101.

Bartholomew, D.J. (1973) *Stochastic Models for Social Processes,* 2nd Edition, John Wiley & Sons, pp. 57–94.

Benoit-Smullyan, J. (1969) "Status, status types and status interrelation-ships", *American Sociological Review,* 9: 151–161.

Bernstein, B. (1965) *Langages et classes sociales. Codes sociolinguistiques et contrôle social.* Paris: Minuit.

Boudon, R. (1973) *L'inégalité des chances. La mobilité sociale dans les sociétés industrielles.* Paris: PUF.

——— (1977) *Effets pervers et ordre social.* Paris: PUF.

——— (1979) *La logique du social.* Paris: PUF.

Bourdieu, P. & Passeron, J.-C. (1970) *La reproduction.* Paris: Minuit.

Burke, P. (1965). "Status and symptoms of stress", *American Sociological Review*, 30: 554–564.

Cherkaoui, M. (2004 [1986]) *Sociologie de l'éducation*. Paris: PUF.

——— (1974) Structures de classe, performances linguistiques et types de socialisation. *Revue Française de Sociologie*, 15(4): 585–599.

——— (1979) *Les paradoxes de la réussite scolaire.* Paris: PUF.

Dubar, C. (2000) *La socialisation*. Paris: Armand Colin.

Feather, N. & Davenport, P. (1982) Desempleo y sentimiento depresivo: Un análisis motivacional y atributivo, *Estudios de Psicología*, 12: 63–81.

Halpin, R. (1990) An application of the Tinto model to the analysis of freshman persistence in a community college, *Community College Review*, 17: 22–32.

Heintz, P. (1970) *Hacia un paradigma sociológico del desarrollo con especial referencia a América Latina,* Buenos Aires, Instituto.

Hollinshead, A., Ellis, R. & Kirbb, E. (1954) "Social mobility and mental illness", *American Sociological Review,* 19: 577–584.

Jackson, E. (1962) "Status consistency and symptoms of stress", *American Sociological Review,* 27: 469–480.

Kuh, G.D. & Hu, S. (2001) "The effects of student-faculty interaction in the 1990s", *Review of Higher Education*, 24: 309–332.

Lensky, G. (1954) "Status crystallization: A non-vertical dimension of social status", *American Sociological Review*, 4: 405–413.

Levy-Garboua, L. (1976) *Les demandes de l'étudiant ou les contradictions de l'universit de masse, Revue Française de Sociologie*, 17(1): 53–80.

Matras J. (1960) "Differential fertility, intergenerational occupational distribution: Some elementary interrelations", *Populations Studies*, 13–14(15): 187–197.

McClelland D. (1961) *The Achieving Society.* Princeton, NJ: Van Nostrand Company, Inc.

Mingat, A. & Rasera, J. (1981) *Enquête longitudinale 3. Après la première année d'études. Réorientation, réussite, scolarité.* Dijon: Université of Dijon.

Pascarella, E. (2001) "Identifying excellence in undergraduate education: Are we even close?", *Change*, 33(3): 19–23.

Pascarella, E. & Terenzini, P. (1991) *How College Affects Students: Findings and Insights from Twenty Years of Research*. San Francisco: Jossey-Bass.

——— (2005) *How College Affects Students: A Third Decade of Research*. San Francisco: Jossey-Bass.

Tinto, V. (1975) "Dropout from higher education: A theoretical synthesis of recent research", *Review of Educational Research*, 45: 89–125.

——— (1998) "Colleges as communities: Taking research on student persistent seriously", *Review of Higher Education*, 21: 167–177.

Thomas, W. & Znanieki, F. (1974 [1918]) *The Polish Peasant in Europe and America*. New York: Octagon Books.

Seligman, M. (1975) *Indefensión*. Madrid, Debate.

Weiner, B. (1985) "An attributional theory of achievement motivation and emotion", *Psychological Review,* 92(4): 548–573.

Yasuda, S. (1964) "A methodological inquiry into social mobility", *American Sociological Review*, 29: 16–23.

19

CHANGES IN THE FRENCH EDUCATION SYSTEM AND INEQUALITY OF OPPORTUNITY ISSUES

Going Beyond Preconceptions

Nathalie Bulle
CNRS, Paris; GEMASS, Paris

1. EVALUATING DEMOCRATIZATION POLICIES

In the seventies and eighties, Mohamed Cherkaoui was one of the most active scholars in French sociology of education. One of his main research interests concerned the evaluation of the effects of school policies on the evolution of inequality of opportunity across social groups (Cherkaoui, 1979; 1982). In this paper, I wish to pay tribute to him by going back to this topic with the specific aim to advance some unsolved issues concerning the empirical measure of educational inequality.

When it comes to assessing school policies and interpreting observed trends, a major problem arises in sociology. In fact, the measurement of inequality of opportunities and its evolution over time is one of the most complex issues that sociology of education has to resolve. There are just as many ways of solving this problem as there are ways of conceiving of equality between social groups.[1] Each measure of inequality supports an argument and is linked to a particular aspect of inequality. However, as far as the evaluation of democratization policies is concerned, once the problems posed by "quantitative" democratization (access to education) have been overcome to a large extent, we turn our attention to a new, very precise object. We wonder if the social groups which had the lowest level of access to education in the system's previous state have progressed relatively better than the others.

This question itself refers to two different problems. The first is related to the evolution of the inequality of links between educational stratification and social stratification. The second is related to the evolution of the inequality of micro-sociological processes of selection—in the broadest sense, including all processes the effects of which influence the chances of access to the school level under consideration—independent of the distribution of educational levels. This is one of the most widespread implicit interpretations of what is known as qualitative democratization. It is a question of knowing whether the differences observed from one period to another in terms of inequality of opportunity can be attributed to the opening up of the educational system, that is to say, to the increase in the number of individuals attaining the higher levels of the educational system, or if they reflect a variation in the results of the micro-sociological processes of "selection". That is what we will refer to below as inequality within the selection process. Assessments on this subject have been carried out until now on the basis of measures that are inappropriate for this specific aspect of inequality.

Furthermore, to support the inter-temporal or inter-societal comparisons between populations, we need measures that are "insensitive to margins". Margins insensitivity, in a broad sense, means that the intensity of inequality measured by the measure at stake keeps its significance whatever the margins' values of the contingency table are, one condition being that in each context defined by the contingency table's margins, the same magnitude of inequality may be observed. Hence, an index's insensitivity to the distributions of margins allows margin-free comparisons regarding the precise aspect of inequalities the index measures.

The measurement of odds ratios and the associated log-linear models offer a response to the first problem posed, that of the intrinsic evolution in the inequality of links between educational stratification and social stratification. Also, Bulle (2009a) proposed a measure in response to the second problem, that of the measurement of inequality regarding selection. This measure responds to a central question in the assessment of democratization policies. In fact, its aim is to understand observed trends on a macrological level, using a measure that apprehends the results of the micrological processes that generate inequality of opportunity.

The usual measures of inequality of opportunity do not permit such a level of understanding. The fact of passing (versus failing) the baccalaureate does not have the same meaning in terms of relative success (versus relative failure) when 20% of individuals in a generation obtain the baccalaureate diploma and when 80% of them obtain it. This is shown by the frequent observation that inequality is simply moved from one level to another in the educational system as levels of education are opened further.[2] The measured intensity of the inequality of the micro-processes in play must retain the same meaning regardless of the opening-up of access to the school level under consideration.

In this perspective, inequality within a selection process is defined as a measure permitting comparison of the results of the selection process for access to a discrete good *G* in a reference frame independent of the variation of overall access to *G* (such as the percentile ranks of a distance to *G*). Bulle (2009) developed such a measure which, moreover, is insensitive to margins. By relying on this index of inequality of opportunity, the present article aims to compare the results obtained with important interpretations of changes in inequality of educational opportunity accompanying the expansion of secondary and higher education in France. This analysis shows that the method yields substantively different conclusions than those drawn in other contributions based on the same data.

2. DEFINING AN INDEX OF INEQUALITY WITHIN THE SELECTION PROCESS

Generally, inequality of access to a discrete good *G* can be ascribed to:

(1) Net results of the selection process in a broad sense. This

concerns the effects of all of the factors influencing individuals' opportunities of access to G and defining a fictitious rank of precedence for access to G, but taking no account of individuals' actual access.

(2) Diffusion of G in society, i.e., the overall fraction of the population accessing to G.

Inequality with respect to (1) is inequality of the selection process, defined as a measure permitting comparison of the results of the selection process for access to G in a reference frame independent of the variation of overall access to G. The access of individuals from different sub-groups C_i to a discrete good G can be interpreted as stemming from a virtual ranking of individuals from the whole population, as well as a function of the available quantity of G. This ranking permits one to refer to a fixed reference frame of relative opportunity. Inequality of subgroups C_i regarding such a reference frame represents what is defined as 'inequality of the selection process'.

$\cup C_i = C_g^+$ is defined as the set of subgroups C_i where individuals have opportunity of access to G lower than the average. We construct a virtual opportunity distribution of individuals from C_g^+, which is based on an assumption of linearity, and such that knowing the overall access rate to G, this opportunity distribution could underlie the observed access to G of individuals from C_g^+. Note that linearity is just a heuristic construct: it allows us to compare inequality of the selection process among various populations or contexts with different levels of overall access to G.

The inequality coefficient $\tilde{a}_g$ by regularly spreading the discrepancies in the selection process results across the continuous distribution of relative opportunity for access to G which will interest us in the following may be interpreted as the slope of the straight line segment characterizing the opportunity distribution defined. Bulle (2009) shows that the coefficient $\tilde{a}_g$ represents an overall measure of inequality of the selection process and is insensitive to margins (x_j, the overall access rate to G, and m_g, the fraction of the whole population in C_g^+).

If the coefficient a_g defined in equation (I): $a_g = \dfrac{2 \times m_g \times (x_j - r_g)}{(1 - x_j) \times x_j}$ verifies equation (II): $\dfrac{a_g}{2} \leq m_g \leq 1 - \dfrac{a_g}{2}$, the general case applies. In such a case, the inequality coefficient $\widetilde{a}_g$ is such that $\widetilde{a}_g = a_g$ (see appendix). Then—and essentially when the general case applies—$\widetilde{a}_g$ corresponds to twice the value of the difference of proportions comparing columns of the contingency table—i.e. obtained by subtracting the fraction of the disadvantaged subgroup in the subgroup accessing to G to the fraction of the disadvantaged subgroup in the subgroup excluded from G.

The method of measuring inequality of selection used here is applied, in what follows, to the data on which critical analyses of the democratization of education in France, were based. The results obtained will allow us to re-examine classical interpretations of schooling policies effects in the context of expansion of the French educational system.

3. CHANGES IN INEQUALITY OF EDUCATIONAL OPPORTUNITY: CONFLICTING RESULTS AND ALTERNATIVE EXPLANATIONS

3.1 Explaining changes in inequality of access to secondary education

The results obtained for the whole of France from Training-Professional Qualification (FQP) surveys, which were conducted by the National Institute of Statistics and Economic Studies (INSEE) in 1970, 1977, 1985, 1993, and 2003 can be compared with certain key results from the study conducted within the Orléans metropolitan area, and presented in the Prost report. Cohorts as a function of the years of leaving primary school were constituted for this purpose.

Up to the end of the 1950s, changes in the total number of students receiving education at the secondary level constituted the leading factor in the democratization of the educational system. Statistics concerning the social origin of first-year secondary students (*sixième*) from 1936 to 1960 published by Alain Girard in *Population* in 1962 (I.N.E.D. 1970; Prost 1986: Table I.2) show that the representation of children of manual workers among these first-year secondary students went up sharply immediately after 1945 (rising from 2.7% to 12.4%), then remained stable until 1958, when this representation began to trend upward again. According to Prost, on the basis of these observations, the stability of social recruitment among first-year secondary students prior to the reforms of 1959 and 1963, which are at the origin of the extension of the schooling obligation from the age of 14 years to the age of 16 years[3] and of a start in the unification of secondary institutions, is undeniable, and if democratization had occurred, it had done so at the level of the *cours complémentaires*—which proposed a short secondary curriculum—not counted in national statistics. Otherwise, after 1958, since progress in the representation of the children of manual workers took place in all levels of study, this progress could not be considered the result of reforms that only affected first-year students. The hypothesis formulated to explain this circumstance is *that expansion of the educational system, past a certain saturation point, brought about a reduction in the inequality of opportunity*, the recruitment of additional students involving an appeal to different social strata (Prost 1986: 56).

Now, upon the basis of the INSEE surveys that did take into account the *cours complémentaires*, if we look at changes in the representation of the children of manual workers among students entering school at the secondary level, we actually observe few differences between the situation before and after the Second World War, but the rate stagnates at around 23% up to the middle of the 1950s, then increases fairly rapidly until the middle of the 1970s, at which time the representation of the children of manual workers among students entering the secondary level is practically equal to their representation among students finishing primary school. The trends observed cannot allow us to conclude that there was a variation of inequality of opportunity within the selection process over time. In fact, we can easily show that, even if the level of inequality of selection remained stable, the rate of school attendance for children from disadvantaged social groups, i.e., the groups showing a rate of access to secondary school below the overall access rate, would increase along with the expansion of the educational system, and would do so at an increasing rate, while rates of school attendance for children from advantaged social groups would increase at a diminishing rate. To illustrate this dynamic of change, we may compare the theoretical values for the rate of school attendance for students from the disadvantaged social group—this group is formed here by children from families of manual workers and farmers—in the case where inequality within

Table 1: *Changes in entry rates in secondary education in France, theoretical rates given under the hypothesis of stability of inequality of opportunity in the selection process*

Period (%)	**Before 1930**	**1931–1935**	**1936–1940**	**1941–1945**	**1946–1950**	**1951–1955**	**1956–1960**	**1961–1965**	**1966–1970**	**1971–1975**	**1976–1980**
Children of farmers and manual workers											
Rates of secondary school entrance	10	17	17	18	17	26	38	43	64	89	93
Theoretical rates of entrance	13	19	21	19	19	28	37	41	60	88	94
Children of the rest of the schooling population											
Rates of secondary school entrance	45	55	61	54	54	66	74	76	85	96	98
Theoretical rates of entrance	41	52	55	52	52	64	74	78	90	98	99

Source: FQP surveys conducted by INSEE in 1977, 1985, 1993, 2003.

the selection process should remain stable over the entire period, with the real values for these rates of school attendance. For this calculation, the coefficients of inequality of opportunity within selection were calculated for different five-year consecutive periods marked off here. The theoretical rates for school attendance r_g are deduced from equation (I) by means of (1) a stable theoretical inequality of opportunity in selection with a coefficient of inequality of opportunity equal to the average value of this coefficient over the period under study, and (2) the real marginal values (that correspond here to the proportion x_j of the population gaining access to secondary education and to the fractions m_i of children from families of manual workers and farmers in the population leaving primary school). It appears that the real values and the theoretical values, which would be obtained in case of stability of inequality of opportunity in the selection process, vary in a quite comparable manner (see Table 1).

In reality, the coefficient of inequality of opportunity within selection for gaining entry to first-year secondary study varies significantly over the period. Overall, it fell from the beginning of the 20th century,

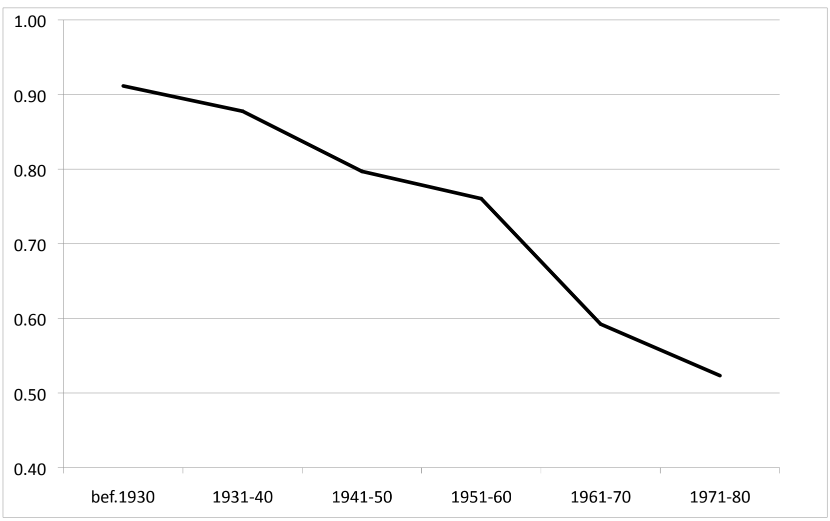


Figure 1: *Evolution of inequality of the selection process for access to secondary education – Decades of entry in secondary education*

Source: FQP surveys conducted by INSEE in 1977, 1985, 1993, 2003 with a value of 0.9, until the end of the 1980s, attaining a value close to 0.5 (cf. Figure 1). The decrease in inequality was slightly faster in the 1960s. Prost's assumption of a threshold effect reflecting priority given to children from advantaged social groups is therefore invalidated by the continuous and progressive aspect of the reduction in inequality of opportunity in the selection process for access to secondary education. Moreover, this progressive aspect tends to show that the democratization of access to secondary education was more endorsed than caused by schooling policies.[4] Indeed, the very influence of the latter cannot be separated from the economic transformations of the post-war period, leading to increased standards of family life and an increased need for skills in the labour market, correlative to an acceleration of the dynamics of access to secondary education by an endogenous movement, the maximum speed being situated in the mid-1960s. The development of this rate x_j can be compared, as Cherkaoui (1982: 39–41) shows (in the case of access to the baccalaureate), to the diffusion of a cultural good, which can be modelled by a logistic function that would describe the endogenous rhythm of diffusion over time. Summarizing these changes, our hypothesis is that the decline in inequality within selection for access to secondary education is linked to the merger of the primary and secondary levels of education that made secondary studies into a regular prolongation of primary education. Such a merger reflects the change in the rapport families have with school, and this is reflected by a progressive decrease in inequality within selection.

To sum up: even if the pace of change in access rates for children from families of manual workers and farmers at the secondary level was quicker than that for non-manual workers and non-agricultural categories, this was principally due to the general increase in attendance rates—such changes would have occurred if selection inequality for entry to secondary level had remained constant. This is made clear by a comparison of the real entry rates and the theoretical entry rates under such an assumption. Nevertheless, the analysis of the inequality of the selection process during the expansion period of the first cycles of secondary education demonstrates that the democratization movement was not uniform. Inequality of selection for access to secondary education declined throughout the 20th century, at a pace which suggests that the results of the selection process reflect firstly changes in situational factors that affected the structure of the decision process on the part of individuals from various social categories—economic development, integrative schooling policies, and interdependence of choices.

3.2 Explaining changes in inequality of educational attainment in secondary education

Log-linear models have been used for the analysis of the connection between social origin and level of education in secondary education in France. These analyses may conclude that inequality of opportunity is persistent (Garnier and Raffalovich 1984; Goux and Maurin 1997) or that it is falling overall (Thélot and Vallet 2000; Vallet 2004) or in part (Garnier and Smith 1986) as a function of models, specific levels of education, or specific time-frames. Nonetheless, interpretations developed on the basis of these analyses have tended to assimilate the changes over time of *net connections* between social origins and educational levels, measured by *odds ratios*, to the changes over time in the selection process as defined here.

The students cohorts surveys '*Panels d'élèves 1980 and 1989*' conducted by the National Education Ministry, concerning students who entered the first year of secondary education (*collège*), respectively, in 1980 and 1989, allow us to study school destinations of cohorts that are detailed and nationally representative.[5] On this basis, Thélot and Vallet (2000) compare the relative chances of children of higher-grade professionals and managers *versus* children of manual workers of getting or not getting a baccalaureate certificate, or a certain type of baccalaureate certificate. If we use the same empirical basis and consult the results from panels 1980 and 1989, presented in Tables 2 and 3, respectively, we see a reduction in the gap in relative access rates for baccalaureates between disadvantaged and advantaged categories. It appears that, among those students who entered first year of *collège* (6th grade, *sixième*) in 1980, the chances of obtaining, as opposed to not obtaining, a baccalaureate, whatever its type (academic, technical, or vocational), for children of higher-grade professionals and managers was 10.8 times higher than that given for manual workers' children, even though the same relation of relative chances scored 7.5 among the entrants to

Table 2: *Achievement of students who entered first-year of secondary education in 1980, by social origin (PCS)*

% raw	General	Technical	Vocational	Non bachel.'s	Total (number)
Farmers	18.2	11.0	0.6	70.4	1193
Artisans	27.3	11.0	0.4	61.3	1813
Higher-grade prof. and manag.	67.5	8.0	0.3	24.2	1889
Lower-grade prof. and manag.	35.6	14.0	0.9	49.6	3165
Employees	20.1	12.1	1.1	66.7	3173
Manual workers	11.6	9.9	1.0	77.4	6685
Not working	8.9	5.8	0.7	84.6	1114
Total (number)	4624	2034	161	12213	19032

Source: Ministry of National Education Student Panel 1989.

Table 3: *Achievement of students who entered first-year of secondary education in 1989, by social origin (PCS)*

% raw	General	Technical	Vocational	Non bachel.'s	Total (number)
Farmers	39.0	14.1	9.8	37.0	793
Artisans	35.7	16.1	8.3	39.9	2105
Higher-grade prof. and manag.	74.4	10.5	2.4	12.8	3048
Lower-grade prof. and manag.	48.9	18.9	6.3	25.9	4076
Employees	30.2	17.6	8.8	43.4	2740
Manual workers	19.5	17.1	10.9	52.5	7772
Not working	12.3	11.1	7.0	69.7	955
Total (number)	7782	3453	1739	8515	21489

Source: Ministry of National Education Student Panel 1989.

first-year in 1989. The gap in relative access rates for academic and technical baccalaureates calculated for the same social categories drops from 11.2 to 9.7 and the gap in access for an academic baccalaureate from 15.8 to 12 between the 1980 and 1989 cohorts.

Now, if we calculate the corresponding coefficients of inequality within selection $\widetilde{a}_g$ for the two cohorts, we get a different picture of the course of these changes over time. The coefficient of inequality for access to the baccalaureate drops a little, from 0.58 to 0.54, in connection with the creation of vocational baccalaureates. However, the coefficient of inequality within selection for access to academic or technological baccalaureates rises, from 0.59 to 0.61, while the coefficient of inequality of selection for access to the academic baccalaureate decreases slightly (from 0.70 to 0.69). In fact, opportunity within selection for access to general or technical baccalaureates does not vary significantly from one cohort to another. If we distinguish between girls and boys, diverse trends appear. A shift in the inequality within the selection process is observed in the case of the girls, mainly due to their growing investment in education during this period, whereas the relative situation of the boys on the other hand tended to deteriorate. These developments occurred during a period marked by a major phase of the expansion of second cycles in secondary education. Indeed, for the two cohorts studied, the number of baccalaureate holders passed from 36% to 60%, those with a general or technological baccalaureate went from 35% to 52% and those with a general baccalaureate went from 24% to 36%. This phase was accompanied by schooling policies supposed to enhance the equalization of opportunity in the selection process through a diminishing of various kinds of streaming and educational renovation through a levelling of academic standards (orientation law on Education in 1989 and pedagogical renovation of the *lycée* in 1992). The first cohort was not exposed to these educational and structural changes, and the second cohort was exposed to them during their high school studies.

We thus observe a stability or increase of inequality within the selection process in the last period studied which is characterized by an opening up of access to the baccalaureate degree and a development of democratization policies. It is definitely the case that the changes observed above, which show a weakening of the net associations between social origins and access to the academic or technical baccalaureates, are essentially the consequence of the opening up of these baccalaureates, that is, of quantitative democratization. In fact, however, they conceal the trend of inequality within the process of selection for gaining access to the academic or technological baccalaureates to increase for boys in the reformed system.

3.3 Has higher education "consecrated the cultural privileges of the upper classes"?

According to the analyses of Bourdieu and Passeron in *La Reproduction* (1970), the expansion of higher education is supposed to have 'consecrated the cultural privileges of the upper classes'. Bourdieu and Passeron (1970:260) refer, in this context, to the changes in the absolute or objective chances of individuals as a function of their social origin: in particular, they refer here to the changes in rates for access to higher education according to socio-occupational origins between 1961–1962 and 1965–1966. This access was curtailed so drastically as to make success simply improbable for individuals from socially disadvantaged classes, while at the same time it became commonplace for individuals from the 'upper' classes. Still, however, the differentiation of the educational system would conceal the conservation of chances of obtaining educational credentials of a certain relative rarity, and, in correlation, the simple translation of the structure of objective chances for individuals originating in the various categories. Based on this same data, Bourdieu, Boltanski, and Saint-Martin (1973) also develop a thesis on the conservation of relative distances between the categories over the period of system expansion. The substitution of cultural capital in the role once played by economic capital in the process of mobility is thought to have brought about a kind of inflation of educational credentials and, as a reaction, an overinvestment in education from privileged categories, thus producing a simple transposition of objective chances for the individuals in these categories (Bourdieu, Boltanski and de Saint Martin 1973: 112).

Baudelot *et al.* (1981) resumed the discussion on inequality of opportunity for access to higher education, basing their analyses on a longer period of time, that is, access to higher education between 1959–1960 and 1975–1976. These sociologists proposed to evaluate the changes over time of inequality of selection. More specifically, they asked this question: did the easing of selection criteria really constitute a process of catching up with the most advantaged, on the part of the least advantaged, or is it not rather the case that there has been, on the contrary, a simple quantitative transformation, without any modification of the social aspect of the process? To answer this question, they evaluated the 'proportion of beneficiaries of the expansion of Universities according to social background'. They calculated, from this point of view, the net number of beneficiaries by social category (the difference between the number of real beneficiaries and the number of beneficiaries that would have been observed if the access rates (r_{1959}) had remained stable between the two periods), which they compared with the number of potential beneficiaries of the expansion of the system according to social category (the number of those who would not have attended university if the access rates had remained stable between the two periods). The calculus

Table 4: Changes in university student body between 1959–1960 and 1975–1976, by CSP

	Eligible to attend university (20–24 yrs)		**Attended university**		**Proportion of beneficiaries of university expansion**
Social origin	**1959–60**	**1975–76**	**1959–60**	**1975–76**	
Farmers	475,000	442,000	8,784	35,663	6.4%
Farm workers	164,000	145,000	1,124	2,984	1.4%
Large proprietors	319,000	381,000	31,434	72,238	10.1%
Higher-grade profess. and managers	139,000	295,000	51,872	211,848	55.0%
Lower-grade profess. and managers	160,000	337,000	32,088	107,620	14.9%
Employees, army and pol.	301,000	458,000	20,051	102,693	16.8%
Manual workers	1,138,000	1,946,000	5,878	83,864	3.8%
Others	222,000	242,000	22,919	78,885	24.8%
Total	2,918,000	4,246,000	174,150	695,795	11.1%

Source: C. Baudelot *et al.*, *Les étudiants, l'emploi, la crise*, Tables 3 and 4 is thus $(r_{1975} - r_{1959})/(1 - r_{1959})$. The results are presented in Table 4. These results reveal a great variation in changes over time, according to social category, particularly a proportion of beneficiaries of the expansion of the universities of 3.8% for manual workers' children, contrasted with 55.0% for children of higher-grade professionals and managers. On the basis of these measurements, the authors of the analysis concluded that the most socially advantaged groups had benefited much more than others from the easing of selection criteria.

To determine which categories have benefited the most from the expansion of universities, one might have calculated the progress of different odds ratios, in particular the chances of individuals from different categories, relative to the sons and daughters of manual workers, to gain admission rather than to fail to gain admission to university. These chances, in fact, diminish for all categories, sinking, for instance, from 115 to 57 for the sons and daughters of higher-grade professionals and managers.

Actually, if we calculate the overall level of inequality of selection in the population $\tilde{a}_g$ based on the same data, it appears that it falls very slightly between the two periods, from 1.14 to 1.02. The results obtained here must nevertheless be considered with a degree of caution, because the fraction of each category in a generation is evaluated in a fairly imprecise manner based on the data employed here, and the period studied is relatively short. Nevertheless, it would be false to conclude, on the basis of these data, that qualitative changes over time in the selection process had occurred in terms that were contrary to democratization.

4. CONCLUDING REMARKS

Evaluating educational policies may often depend on being able to grasp the changes that affect the selection processes underlying inequality of educational opportunity. In this respect, it is important to keep to a reference frame that retains a stable meaning with regard to the results of micro-sociological processes of selection, when overall access to the various educational levels under study varies. This is why we propose to evaluate the effects of school policies in France by measuring inequality of the selection process. The index of inequality used here, which offers a solution to such issue and which is insensitive to margins, led to questioning some of the best-known assessments previously argued with regard to generative mechanisms of inequality of educational opportunity in France.

We were able to show that access to secondary education had been accompanied by a real reduction in the inequality within the selection process, and that this reduction had been fairly steady throughout the 20th century up to the enrolment in secondary education of a whole age group. In other words, we observed no threshold effect suggesting the inherent injustice of selective processes giving priority to children from advantaged social categories. Rather, we observed an increase in investment by all social groups in education, marking a relative progress of disadvantaged groups.

We also showed that, unlike the results of analyses based on ad hoc indices, the expansion of higher education was accompanied by a weakening of inequality within selection revealing, as was the case for access to secondary education, a change in its role in the general economy of the French education system. These results invalidate in particular the old neo-Marxist assumptions of a stabilization, or even a worsening of inequality within the selection process following the increased numbers of places in academic pathways.

These developments, which were allowed by the gradual integration of the education system—the different levels of primary, secondary and higher education being placed in logical continuity with one another—are correlated to the economic transformations that occurred throughout the 20th century and their impact on both the demand and the supply of education. These results corroborate the founding premises of *L'inégalité des chances* (Boudon 1973), by showing that the evolution of families' situations of choice (higher economic levels and corresponding investment in school) has probably had a major impact on the weakening of inequality of opportunity within the selection process (here, for access to secondary and higher education).

We have shown, moreover, that the important educational and structural reforms of the 1980s–90s, carried out in the name of democratization of the education system and involving a weakening of the curriculum's academic requirements and the explicit norms of educational achievement, had no positive effect on inequality within the selection process for secondary education, and even reinforced it. In this regard, we had to separate the cases of girls and boys from disadvantaged categories. The progress of the girls, through technological and professional baccalaureates in particular, appears to be a consequence of their increased investment in education. The tendency toward reinforced inequality within the selection process for boys regarding access to these same pathways could be the consequence of a decrease, between the two cohorts, in the relative educational achievement of the least successful population.

These developments in the inequality of boys within the selection process for access to the major types of baccalaureates can be substantiated by theories and research based on a rational conception of the social actor. In the words of James Coleman (1990: 29), the relative intensity of the convergent school influences and the divergent out-of-school influences determines the effectiveness of the educational system in providing equality of educational opportunity. In fact, these theories and research reveal that convergent school influences increase when school develops clear selection processes, explicit norms of educational achievement and knowledge. These factors of educational achievement were revealed very early on by Cherkaoui (1972) using data from the International Project for the Evaluation of Educational Achievement in 1970–71.[6] Cherkaoui showed that in all countries academic stratification, section and type of establishment, was more determining of students' success than social stratification, with the exception of the American system in which, due to the "opacity of school structures" and, correlatively, the importance of family choices regarding the quality of their children's education, it was social class which was more determining:[7] "Comparing education systems teaches us that the more the academic criteria for selection are visible, explicit and immediately intelligible, the greater the precision of forecasts, risks are therefore reduced, investment in studies appears to be more justified and, finally; the success of students from the working classes is greater. Conversely, the more these rules are invisible, the greater the risks, the more important the phenomena of withdrawing pupils from disadvantaged classes and the lower their academic success." (Cherkaoui, 1979: 202). The French system has tended to develop during the period separating the two cohorts in the direction of greater opacity of its operating standards, corresponding to educational transformations made in the name of success for all, which have led to a weakening of the academic requirements of educational programs, and the explicit and structured character of the teaching (Bulle 2009b).

Finally, we believe we have shown the importance of understanding the results of microsociological processes that generate unequal access to a discrete good G on the basis of a simple model, such as the one that the measure used here is based on. It offers the advantage of overcoming preconceived ideas relating to the processes that underpin the democratization of education systems, often biased by evaluative and political presuppositions. In future, its use could support more reliable interpretations of the effects of school policies and, in so doing, truly enlighten the latter.

PRACTICAL GUIDE FOR THE CALCULATION OF $\tilde{a}_g$[8]

1—Calculate the access rates r_i to the good G of the various social subgroups C_i.

2—$\cup C_i = C_g^+$ is defined as the set of subgroups C_i where individuals have opportunity of access to G r_i lower than the average x_j. The value m_g is defined as the fraction of the population in social subgroup C_g^+, r_g as the access rate to G of individuals from C_g^+.

Calculate $a_g = \dfrac{2 \times m_g \times (x_j - r_g)}{(1 - x_j) \times x_j}$

Case 1 General case

$$\frac{a_g}{2} \leq m_g \leq 1 - \frac{a_g}{2} \text{ then } \tilde{a}_g = a_g = \frac{2 \times m_g \times (x_j - r_g)}{(1 - x_j) \times x_j}$$

Case 2 $\tilde{d}(x, C_g^+)$ intersects the base and one side of the square where $\tilde{f}(x, C_g^+)$ is traced: $m_g \leqslant \inf\ \frac{a_g}{2}, 1 - \frac{a_g}{2})$ then $\tilde{a}_g = 2m_g \left[\dfrac{1 - \sqrt{r_g}}{1 - x_j}\right]^2$

Case 3 $\widetilde{d}(x, C_g^+)$ intersects the top and one side of the square where $\widetilde{f}(x, C_g^+)$ is traced: $m_g \geqslant \sup \frac{a_g}{2}, 1-\frac{a_g}{2}\Big)$ then

$$\widetilde{a}_g = 2\left[\frac{\sqrt{1-m_g}-\sqrt{1-x_j-m_g+r_g m_g}}{x_j}\right]^2$$

Case 4 $\widetilde{d}(x, C_g^+)$ intersects the base and the top of the square where $\widetilde{f}(x, C_g^+)$ is traced:

$$1-\frac{a_g}{2} \leqslant m_g \leqslant \frac{a_g}{2} \text{ then } \widetilde{a}_g = \frac{1}{2}\left[\frac{1}{\sqrt{r_g m_g}+\sqrt{1-x_j-m_g+r_g m_g}}\right]^2$$

NOTES

1. See on this subject in particular Combessie (1984) and the debate on this subject published in the same issue of the *Revue Française de Sociologie*.
2. See on this subject Merllie (1985).
3. We note here that the obligation to attend school until the age of 16 under the 6 January 1959 decree, which only concerned 6-year-olds who were entering the first year of primary education in 1959, 8 years later, i.e. in 1967, affected 14-year-old students who were then obliged to extend their schooling.
4. We note, as another illustration of this aspect of school policies, that the decrease in the percentage of students who obtain a baccalaureate in Philosophy preceded by about a decade the reform of medical studies by the Debré reform of 1958, which focused new programs on basic sciences in particular. Cherkaoui (1982: chap. 6).
5. 1980: A group of 20,000 *sixième* (6th grade) pupils was monitored for ten years—1989: A group of 27,000 *sixième* pupils was monitored for 12 years.
6. These data relate to random samples of students whose ages fall below the age limit for compulsory education in the different countries considered (pupils aged between 13 and 13 years and 11 months).
7. “Moreover, it is not inconceivable that this permeability of the American school system to the direct influence of the class structure might reflect a function of the expectations of the users themselves, who would be firmly convinced of its homogeneity, as opposed to Europeans for whom the section, the type of school, and the hierarchy of networks are as decisive for academic success as they are for the social status to come.” Cherkaoui (1979: 94).
8. The values of $\widetilde{a}_g$ in specific cases are developed in Bulle (2009a: 583–588).

REFERENCES

Baudelot, C., Benoliel, R., Cukrowicz, H. and Establet, R. (1981) *Les étudiants, l’emploi, la crise*. Paris: Maspero.

Boudon, R. (1973) *L'inégalité des chances. La mobilité sociale dans les sociétés industrielles*. Paris: Armand Colin.

Bourdieu, P., and Passeron, J.C. (1970) *La Reproduction*. Paris: Les Éditions de Minuit.

Bourdieu, P., Boltanski, L. and de Saint Martin, M. (1973) "Les stratégies de reconversion. Les classes sociales et le système d'enseignement", *Information sur les Sciences Sociales*, 12(5): 61–113.

Bulle, N. (2009a) "Comparative analysis of inequality of opportunity. Description versus explanation", *Journal of Interdisciplinary Mathematics*, 12: 565–588.

——— (2009b) *L'école et son double*. Paris: Hemann.

Cherkaoui, M. (1979) *Les paradoxes de la réussite scolaire. Sociologie comparée des systèmes d'enseignement*. Paris: PUF.

——— (1982) *Les changements du système éducatif en France 1950–1980*. Paris: PUF.

Coleman, J.S. (1990) *Equality and Achievement in Education*. San Francisco: Westview Press, 1990.

Combessie, J.C. (1984) "L'évolution comparée des inégalités: problèmes statistiques", *Revue Française de Sociologie*, XXV: 233–254.

Garnier, M.A. and Raffalovich, L.E. (1984) "The evolution of equality of educational opportunities in France", *Sociology of Education* 57: 1–11.

Garnier, M.A. and Smith, H.L. (1986) "Association between background and educational attainment in France", *Sociological Methods & Research*, 14(3): 317–344.

Goux, D., and Maurin, E. (1997) "Démocratisation de l'école et persistance des inégalités", *Économie et Statistique*, 306(6): 27–37.

Merllie, D. (1985), "Analysis of the interaction between variables. Statistical or sociological problem?", *Revue Française de Sociologie*, 26: 629–652.

Prost, A. (1986) *L'enseignement s'est-il démocratisé? Les élèves des lycées et collèges de l'agglomération d'Orléans de 1945 à 1980*. Paris: PUF.

Thélot, C., and Vallet, L.A. (2000) "La réduction des inégalités sociales devant l'école depuis le début du siècle", *Économie et Statistique*, 334(4): 3–32.

20

SCHOOL DROPOUT AND RELATED ASSESSMENTS

The Case of Morocco

Brahim Chedati

Centre d'Orientation et de Planification de l'Education (COPE), Rabat, Morocco

INTRODUCTION

Improving the internal efficiency of the Moroccan education system is one of the major objectives of the National Charter for Education and Training, which announced back in 2000 that "*tous les efforts seront déployés pour attirer les apprenants et faire en sorte que leur scolarité évolue de manière continue, durable et réussie, et que soient progressivement jugulés la déperdition, l'échec scolaire ou la poursuite factice ou intermittente des études*". To this end, the Charter predicted that 90% of students enrolled in the first year of Primary Education (cycle *primaire*) were expected to reach the end of that cycle in 2005, 80% the end of junior secondary education (cycle *secondaire collégial*) by 2008, and 60% the end of senior secondary education (cycle *secondaire qualifiant*) by 2011.

Everyone knows today that none of these objectives have been achieved. The gaps between the Charter's predictions and reality gives rise to a fundamental question: is the failure to reach these objectives due to unsound and unrealistic predictions? (assumptions made, models used, etc.), or is it due to the irrelevance of the action plans devised and the activities implemented under them, which were not efficient enough to deliver the required impact?

The purpose of this paper is not to provide answers to such questions, but rather to analytically assess the performances of the Moroccan education subsystem (i.e. primary school) in terms of performance and efficiency and to present the outcome of the ex-post evaluation we conducted on the "school dropout prevention" component of the Morocco–UNICEF Cooperation Programme under which pilot activities favouring student retention have been at seven (7) pilot delegations[1] of the Ministry of National Education.[2]

The pilot programme's keystone hypothesis, which we had the opportunity to check during the process of evaluating the programme, was as follows: the combination of learner-centred complementary activities contributes to dropout reduction. Statistical data collected *in situ* and interviews with key local stakeholders (administrative and teaching staff and associations), have confirmed the hypothesis in five among the seven sites covered by the programme. The cost effective character of such experimental activities implemented under the programme has also been demonstrated.

I. THE CONCEPT OF EDUCATION EFFICIENCY AND ITS UNDERLYING FACTORS

Like in economics, efficiency is defined as the relationship between the means used and the results obtained. In education, the result or output designates all graduates (products deemed "finished") or students/students who have reached the end of a given stage without obtaining a diploma (product deemed "semi-finished").

The focus on economy in today's research on educational efficiency seems even more obvious than the notion of performance that was more fashionable in the early writings of education economists in the 1960s (Khoi, 1967; Vaizey, 1962). This is probably the renewal of human capital theories, applied to a micro sociological level, which justifies adopting the concept of efficiency (Eicher *et al.*, 1979).

In education, the notion of efficiency is two-dimensional. It is primarily internal in the sense that it is related to the extent of the realisation of the fixed objectives of educational system in its broadest sense. It can also be quantitatively evaluated through the ratio between the number of students successfully completing a given training or stage, and the number of students enrolled at the beginning of a training or initial cohort. It can also be assessed qualitatively by comparing knowledge and skills before and after a given training. The second dimension of efficiency is external. It is based mainly on the analysis of the relationship between economic needs and the skills and qualifications acquired by school leavers.

The internal efficiency of the education system refers to school production factors in their interaction within the school representing a production space, and according to a structured school production function, while external efficiency refers to school seen as a factor of economic production. In technical terms, the internal efficiency of a system / sub-education system is calculated by comparing the total number of student-years[3] usefully spent with the total of student-years invested (Chedati, 1988a, 1988b; Thonstad, 1992).

Formally the efficiency ratio is calculated as follows:

$$ER = \frac{n \times \sum_j D_j}{TSY}$$

Where n = training duration (stage)

$\sum_j D_j$ = number of graduates after j years ($j > n$ in case of grade repetition)

TSY= total of student-years

As n is an exogenous parameter fixed by the system, ER maximisation is reached when D is at its maximum, i.e. when all students of de the cohort pass the relevant examinations of a given stage's grades, thus making *TSY* equal to $n \times D$. Similarly *TSY* depends directly on flow rates (promotion, repetition and dropout rates).

Internal efficiency depends largely on students' success and on the general conditions of learning. But student achievement is not only the result of individual factors of students, since it is also linked to a set of intra- and extra-curricular variables.

What are the crucial factors of success at school? Many studies have attempted to provide answers to this question (Cherkaoui, 1979, 1982, 2010). Early explanations considered academic performance as basically related to the individual characteristics of students. According to this theory, students arrive at school with unequal skills which would determine their education performance. According to this approach, there are two opposed views as to the source of these "inputs": for some, achievements are the result of biological factors and are accordingly innate; for others, they are acquired and are therefore socially developed.

The Coleman Report "Equality of educational opportunity study" was the authoritative reference of the time, which deals with the impact of social origin and the racial minorities' integration on the academic success of students. The report, which launched the debate on the prevalence of student characteristics as variables explaining almost all of the variability in school, has been the subject of several methodological criticisms challenging the approach and the explanatory factors used to conclude that school does not seem to have a significant impact on student achievement. The well founded observations and critical remarks of Mohamed Cherkaoui on the Coleman Report are amply detailed in many of his works (see, in particular, Cherkaoui, 1979, 1997).

According to critics of Coleman, the individual and socio-economic factors explaining differences in academic achievement are not the only ones involved. Other variables related to the school and to the types of relationships and interrelationships between the teaching staff and the learners also contribute to the observed variability.

Assumptions that school characteristics are largely explaining academic achievement (without eliminating individual factors), combined with the development of basic research in statistical science and methods of measurement in social sciences have led to the emergence of many empirical studies to estimate the impact of factors of different levels on achievement. Hence the emergence of such new factors as school effect, teacher effect and class effect (Bressoux, 1995).

The whole issue originates in the much-debated question of the relationship between the individual and the group or individual and the context or else the individual and the environment. This paradigm is among the ones which have received much of Mohamed Cherkaoui's attention and to which he devoted an important article published in the *Revue Française de Sociologie* (see Cherkaoui 1997).

II. SCHOOL DROPOUT AS AN INDICATOR OF THE SYSTEM'S INEFFICIENCY: THE CURRENT SITUATION AND SUCCESS STORIES

Consider the formula for calculating the efficiency ratio shown on page 3 above.

$$ER = \frac{n \times \sum_j D_j}{TSY}$$

As *n*, which is the duration of the education stage, has been fixed, we said that the efficiency ratio is maximized when D is at its maximum point. Equally, D maximisation hinges on the total absence of student attrition (no repetition or dropout). If, for example n = 3, the ER is maximum (100%) when the TSY is exactly three times the number of outgoing students. In general, technical efficiency is maximal when the equation (n*D = TSY) is materialized.

The higher attrition rates are the less efficient is the system. So, what about Morocco?

In 2009-2010, the national dropout rate in primary schools was 3.1%. This average obviously hides disparities between and within academies. The statistics of the Directorate of Strategy, Planning and Statistics of the Ministry of Education show that girls drop out more than boys in 14 out of 16 academies (87.5%). But these are average rates by gender that aggregate the rates observed at smaller spatial scales (delegation, commune, school).

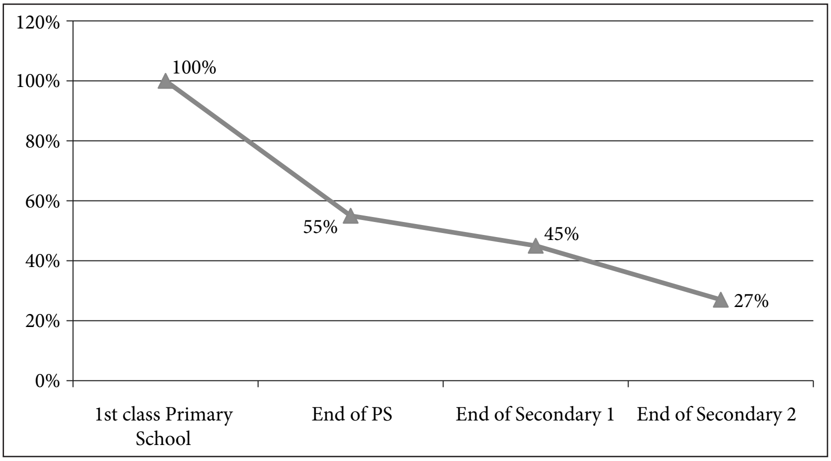


Figure 1: *School attendance patterns*

Of Morocco's sixteen academies that of Taza-Al Hoceima-Taounate is the most affected by school dropout, with 6.1% (7.2% for girls). It is the same academy where the highest dropout rate in the junior secondary school level (*cycle secondaire collégiale*) was recorded, with almost 13% (11.5% for girls).

Meanwhile, dropout at the junior secondary school level affects boys more than girls in 9 out of 10 academies. This means that girls, especially rural ones, once they complete their primary education, tend to be more determined than boys to stay longer in the system. All this calls for a rigorous analysis to identify the factors that explain this gender-differentiated behaviour.

Though the official school statistics show very good results in terms of school attendance rates for children aged 6-11 years,[4] much remains to be done to improve student retention. Indeed, and always on the basis of the official statistics of the competent ministry, in a cohort of 1,000 students enrolled in the first year of primary education, around 265 reach the last stage of senior secondary school and only 150 have the Baccalauréat. This means that nearly 85% of students from the same cohort leave the system at one of the three levels (primary, junior secondary or senior secondary).

III. AN EFFICIENT AND INEXPENSIVE PROGRAMME … BUT SIDESTEPPED

Given the extent of student attrition, especially in suburban and rural areas, the Morocco–UNICEF cooperation programme has implemented since 1999 in suburban areas and since 2002 in rural areas, a diverse yet integrated set of activities at seven delegations of the Ministry of Education as pilot sites.

The said activities focused specifically on the qualitative aspects of education supposed to be factors favouring student retention (underlying assumption).

What are the activities implemented under the programme?

Those activities revolved around four complementary areas: school libraries, student health, formative assessment and preschool education.

a. School libraries … or how to boost book-centred activities

In terms of their approach and their management, the school libraries created under the programme are very different from "traditional" school libraries. Indeed the school libraries created in the pilot sites were the result of a synergy involving students, teachers, Associations of Parents and Guardians of Students (APTE) and the donor (UNICEF).

b. Student health … renewed interest

Within the framework of the fight against school dropout, it was possible to change the approach to hygiene and school health. In fact a situation of total ineffectiveness marked by:

- lack of material resources (equipment and products) and human (medical and paramedical staff);
- virtual absence of medical books for students;
- bad integration of the school with the *délégation de la santé publique* (or even with the local health centre), etc.

has been substituted by a much more dynamic and effective approach resting on:

- Developing integrated action plans with the involvement of the school and the local health centre;
- Sensitizing and training stakeholders in school health and hygiene (APTE, teachers, neighbourhood associations …);
- Individual tracking students using personal records;
- Systematic diagnosis of the health conditions of students in some endemic areas where they are constantly exposed to the risk of disease (trachoma cases in Zagora for example).

c. Formative assessment: assessing for change …

The assessment of students' achievements is not only necessary for the teacher to better "gauge" the level of knowledge acquired by the student, but also because it reflects the "true" level of the learner. In short, it the evaluation process has to be effective and it is therefore necessary that teachers know how to accurately assess their students throughout the whole process of selecting and wording the questions until the ultimate stage of performance scoring.

The programme on integrating classroom formative assessment implemented by the competent ministry was designed to meet this need for teacher training. It is in this context that, in 2002 and 2003, 72 teachers and 210 inspectors and managers participated in 12 training and monitoring sessions. The training has enabled the beneficiaries to master assessment and remediation techniques and tools in the core subjects: Arabic, mathematics, French and life skills.

Through theoretical and practical training, teachers have acquired the ability to identify a student's true cognitive blocking and accordingly develop the necessary tools to overcome its related difficulties. The useful character of such tools has been demonstrated by an impact assessment conducted on a sample of 2,500 students[5] (MEN/UNICEF/UNESCO, 2001). Following the proven success of that first evaluation of the programme on the integration of formative assessment, the ministry planned to enlarge the scope of the experience by integrating it into the regional development plans and extend it as to include other subjects and other education cycles. Formative assessment could also be widespread in the initial training of teachers, starting with the training of trainers at the Teachers Training Centres (CFIs).

d. Preschool as a way to minimize the risk of dropout in primary school and ensure retention beyond

The benefits that preschool ensures today to children in terms of socialisation and capacity / ease to follow pursue primary and post-primary education are well known. Everyone agrees that a child who has benefited from a form of preschool, education, be it traditional or modern, fares better, in terms of comprehension / assimilation, tracking and dynamism, than a child with no preschooling experience.

In Morocco, the comparative advantage of preschooling has not been tackled by specific research, but the issue has been raised more or less directly in studies that are of a general character or dealing with specific topics. The research carried out by Wagner and Spratt (1987) compare the learning achievements made in the first year of primary education by Moroccan children with preschooling experience (Koranic Kouttabs / kindergartens) with those of children who did not attend preschool. The test results clearly show a positive effect of preschool on children's achievements. This same impact has been highlighted by the national study conducted in 1995 by the Ministry of Education in collaboration with UNICEF and UNESCO. The study, which concerned the 4th year of basic education (*enseignement fondamental*), concludes that "*… les élèves ayant bénéficié d'un enseignement préscolaire, que ce soit à l'école moderne ou à l'école coranique réussissent mieux que ceux ayant accédé directement à l'enseignement fondamental, par ailleurs les scores s'améliorent d'autant plus que la durée d'enseignement préscolaire est longue*".[6]

Another study on the 2nd and 5th years of basic education[7] came to the same conclusions, noting, however, that the impact was much more important in numeracy and French with student who attended modern preschools.

Also noteworthy is the impact study conducted in 2003 on 2,500 primary school students which showed that 60% of boys and 53.3% of girls who have reached the threshold of basic skills mastery had attended preschool classes.

Table 1: *Distribution of UNICEF's expenses (in USD)*

	Sensitisation	Equipment	Formative assessment	Total	Percentage
Al Haouz	11,250	16,188	29,000	56,438	13%
Chefchaouen	1,130	44,413	29,000	74,543	18%
Essaouira	7,926	5,901	29,000	42,827	10%
Ouarzazate	4,882	8,660	29,000	42,542	10%
Zagora	11,074	24,546	29,000	64,620	15%
Tangier	40,180	9,310	49,121	98,612	23%
Sidi Y. Ben Ali	16,018	27,258	2,463	45,739	11%
Total	92,460	136,276	196,584	425,320	100%
Percentage	22%	32%	46%	100%	

At what costs?

The overall budget allocated by UNICEF to the various activities of the programme is estimated at $425,320 USD over two years. The following table shows the budget's distribution as per delegation and field of activity.

The data in table 1 reflect a spending approach that largely favours training activities over learning assessment (46% of the overall budget) and, to a lesser extent, over educational equipment in the broad sense (32%).

For what outcomes?

Table 2 shows the evolution of average dropout rates differentiated by gender in delegations and at the level of the pilot sites over the period covered by the programme.

The table shows that, except for the site of Ouarzazate where the dropout rate for boys showed no sign of improvement, and Al Haouz site where the dropout rate for girls increased slightly, all other pilot sites recorded a decrease in their dropout rates over the programme's duration. This reduction was observed for both boys and girls.

The differences in dropout rates reflect the level of performance achieved in the sites. Negative deviations indicate a decrease in dropout

Table 2: *Evolution of dropout rates as per delegation, site and gender*

	Variations (2000/2003)	
	Boys	**Girls**
Zagora		
Delegation's total	– 0.09	– 0.04
Sites	– 2.59	– 3.32
Ouarzazate		
Delegation's total	+ 0.69	+ 0.32
Sites	+ *0.34*	– 0.01
Essaouira		
Delegation's total	+ 2.66	– 0.39
Sites	– 3.6	– 5.9
Marrakech SYBA		
Delegation's total	– 0.33	+ 0.11
Sites	– 1.51	– 0.76
Al Haouz		
Delegation's total	+ 1.34	+ 2.04
Moyenne sites	– 0.5	+ *2.7*
Chefchaouen		
Delegation total	+ 1.16	+ 1.39
Sites	– 2.36	– 0.81
Tangier		
Delegation's total	– 1.58	– 1.19
Sites	– 2.51	– 1.36

rates between 2000 and 2003, and report cases of high performance (Tangier, Chefchaouen, Essaouira Zagora for example).

It is also worth noting that there are differences (in value and meaning) at the level of sites as well as at the general level of delegations between girls dropout rates and those of boys (between and within delegations).

Delegations are represented by points in the plane, based on dropout rates for girls (horizontal axis) and boys (vertical axis). Therefore, a delegation is more effective when it is located in the lower left scale. It features here Essaouira, Zagora, Tangier, and to a lesser extent, Chefchaouen and Sidi Youssef Ben Ali. Meanwhile, Al Haouz and

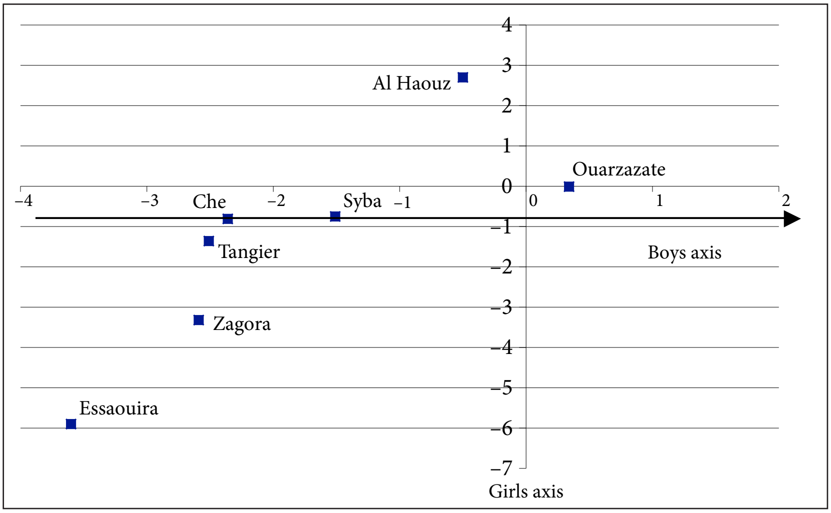


Figure 2: *Site distribution as per gender-based variation of dropout rates*

Ouarzazate are very poorly placed in terms of dropout rates reduction. In Al Haouz, for instance, is the graph shows clearly that the dropout rate for girls has increased by 2.7 points, whereas that of boys has hardly changed in Ouarzazate

Cost-effectiveness ratios

Note first of all that although the term "cost" is used in this document, it actually refers to expenditure, simply because the activities carried out by volunteer students' parents were not taken into account, and only expenses have been accounted for. How to assess the results obtained within the framework of the programme in terms of spending?

To answer this question, we calculated the cost effectiveness ratios at the level of the Education Ministry's delegations covered by the programme. The results obtained in terms dropout rates reduction do not show the same level in all sites.

Except for Al Haouz Delegation and to some extent that of Ouarzazate, the results in terms of dropout rates reduction were very important and the actions undertaken to curb dropout were cost effective, especially in the urban and suburban sites of Tangier and Sidi

Table 3: *Programme's cost/effectiveness ratio by delegation*

Delegation	Unit cost (in USD)	Variation of average dropout rate	Cost/effectiveness Ratio (in AV)	Rank
		Urban & Suburban		
Tangier	1.7	–1.94	0.9	1
SYBA	3.0	–1.14	2.6	2
		Rural		
Essaouira	23.8	–4.75	5.0	4
Zagora	14.1	–2.96	4.8	3
Chefchaouen	46.3	–1.59	29.2	6
Ouarzazate	24.2	0.17	146.7	7
Al Haouz	25.6	1.10	23.3	5

Youssef Ben Ali where costs per student were particularly low (respectively $1.65 USD and $2.91 USD.)

Such unit costs are explained by the important number of students enrolled in the relevant facilities of the suburban sites, on the one hand, and on the other, by the availability of basic equipment considered as a comparative advantage in the case of rural facilities. However, the cost per student ranges between $14.08 USD (Zagora) and $46.25 USD (Chefchaouen) because of the very small size of facilities in rural and also because of the basic equipment expenditures made with a view to ensuring success of the programme[8]. It should be however noted that this is not the case in 7 target delegations. The cost / effectiveness ratio ranges between 1.22 and 54.9. Dropout has not been reduced in Al Haouz, for example, because of the difficulty to ensure a rigorous monitoring of activities and their midterm impact. The table below presents a ranking of the delegations according to their performance and the unit cost of the programme's activities.

By calculating the unit cost accumulated over two years and incurred by the programme alone (all activities included), we obtain an average cost of approximately $9.73 USD. This is of course an aggregate average cost per student for all sites. As shown in Table 3, the actual unit cost varies between a minimum of $1.7 USD in Tangier and $46.3 USD in Chefchaouen.

Based on the total cost per student borne by the Government and families, which we had estimated at $330 USD (Chedati, 2007), and given the average cost recorded at sites covered by the programme (approximately $10 USD), it is possible to prevent 33 cases of dropout by investing the equivalent of one student-year in the same anti-dropout activities initiated by the Morocco–UNICEF programme, without counting the public and private costs (financial and non-financial) of dropout in the medium and long terms.

CONCLUSION

While measuring school efficiency is not so problematic in terms of definition and formalisation, the identification of underlying factors is, however, highly controversial (Cherkaoui, 1979, 1997).

Whereas the net school attendance rate for children aged 6-11 years, has increased by 29.3 percentage points over a period of 13 years, respectively from 68.6% in 1997/98 (before the Charter) to 97.9% in 2011/2012, the retention of these children remains problematic issue.

School dropout, which can be explained by factors related to supply and demand, is highly costly to society (in 2010, we estimated that the cost of dropout in primary education represented approximately 15% of the operating budget allocated to this cycle) (Chedati, 2007).

Given the magnitude of school dropout, Morocco, in association with UNICEF, has established a programme called "programme de lutte contre l'abandon scolaire", with seven delegations in Morocco as targets. The programme included a set of diverse but complementary student-centred activities aimed at improving the school environment and the quality of education.

The assessment we conducted on the impact of implemented activities on school dropout has shown a very positive and efficient outcome. The calculations on the results-resources ratio showed that it was possible to prevent 33 cases of dropout by investing the equivalent of one student-year (about MAD3300 at the time) in the activities privileged by the programme. Indeed, some activities have proved to be effective such as teacher training in formative assessment, medical monitoring of children's health, extracurricular activities, etc. (see Appendix).

It should be that the diverse actions led in primary school, could not have been as effective if the action was not focused on post-primary accommodation facilities (Dar Attalib, boarding at junior secondary schools). Worth of mention also is the role played by local associations (especially APTEs) and the social partners in the success of the programme.

The success of such a programme is partly due to the fact that each pilot school felt as a stakeholder in an inspiring and dynamic group project, not only for staff, students and parents, but for the whole community as well.

We firmly believe that an approach based primarily on the experiences of students, their actual family status that allows them to speak, to express themselves freely, to feel valued by teachers, principals and other students, is a sound basis for success.

Appendix: *Intensity of the effect of programme and extra-programme activities (in italics) on the school dropout rate*

Activities	**+ + + (a)**	**+ + (a)**	**+ (a)**
Quality school grid process	all delegations		
Construction of latrines	Chefchaouen + Al Haouz	Zagora	
*Construction of Dar Attaliba**	Ouarzazate		
Rehabilitation of schools	Zagora + Syba**	Chefchaouen	
Equipping of resource centres		Ouarzazate	
Building junior education schools' annexes	Zagora		
Building teacher housing		Zagora	
Construction of fences			Zagora
Drinking water supply for schools	Zagora	Chefchaouen	
Electric power supply for schools			Zagora
Training preschool instructors	Ouarzazate	Chefchaouen+ Syba	
Training in formative assessment	Ouazazate + Tangier + Essaouira + Syba	Chefchaouen +Zagora	
Training of APTEs	Essaouira + Zagora	Chefchaouen	
Training in equity		Ouarzazate	
Management-centred training of principals		Chefchaouen	
Developing partnership with communes	Syba		

Exchange of visits	Essaouira		
Extracurricular activities by APTEs		Syba	
Distribution of student kits, support	Syba		
Income-generating activities	Al Haouz+ Essaouira		
Developing partnership	Al Haouz		
Sensitization to school dropout bad consequences	Syba+Ouarzazate		
Social mobilisation	Al Haouz		
School libraries		Ouarzazate+syba	
Adjustment of class timetables	Al Haouz		
School health	Tangier Assilah		Syba
Information on child rights		Ouarzazate	
Interaction between schools and preschool institutions			Tangier
Follow-up to students performance (individual sheets)	Tangier Assilah + Syba		
Mothers' literacy		Tangier Assilah	

(a) +++: very strong positive impact ; ++: strong positive impact ; +: average positive impact

(*) Dar Attaliba = female students' housing facility

(**) syba= Sidi Youssef Ben Ali (one of the five districts of the city of Marrakesh).

NOTES

1. The delegations concerned are those of Chefchaouen, Ouarzazate, Al Haouz, Zagora, Sidi Youssef Ben Ali, Tangier-Assilah and Essaouira.
2. full evaluation report is available on UNICEF's website at: http://www.unicef.org/morocco/french/Rapport_abandon_scolaire_last_2004.pdf
3. Student-year (SY) is a measurement unit that aggregates all public annual expenditure necessary to for the schooling of a student for one year. Accordingly, 2 and SYs may mean to 2 students enrolled in the same grade in a given education stage as much as it may indicate a case of grade repetition.
4. These rates increased by 29.3 percentage points between 1997/98 (before the Charter) and 2011/2012 (10 years after the Charter.)
5. Mastery gains evaluation ranged between 16% and 27% depending on the subject
6. Evaluation du Niveau d'Acquisitions des Elèves de la 4ème Année Fondamentale; MEN/UNESCO/UNICEF; El Maarif El Jadida, Rabat, 1996, p. 55.
7. Analyse du fonctionnement du premier CEF au Maroc, *op. cit.*, p. 146
8. Communities actually contribute financially and materially to these expenses by 10% to 30% depending on the sites concerned.

REFERENCES

Bressoux, P. (1995) "Les effets du contexte scolaire sur les acquisitions des élèves: effet-école et effets classes en lecture", *Revue Française de Sociologie*, 36(2): 273–294.

Chedati, B. (1988a) "Les déterminants de la réussite scolaire au primaire public", *Revue de l'INSEA*, 9(November).

——— (1988b) *La reconstitution du flux réel intra-cycle des élèves: note méthodologique*," Rabat: Centre d'Orientation et de Planification de l'Education (COPE).

——— (1989) "Demande sociale d'éducation et gratuité des études: le cas de l'enseignement primaire public marocain", in *Actes des 10èmes journées d'Economie Sociale*, Université de Caen (France).

——— (2007) *Coûts et financement de l'éducation au Maroc*. Conseil Supérieur de l'Enseignement.

——— (2008) "L'abandon scolaire est-il une fatalité?" Contribution to the Colloque International sur l'Abandon Scolaire organizaed by Unesco and Unicef, Tunis 18–20 Novembre 2008.

——— (2012) "La question de la gratuité de l'enseignement et la classe moyenne au Maroc", *Revue Marocaine de Sciences Politiques*.

Chedati, B. and Allama, A. (2007) *Etude sur l'équité en éducation au Maroc*. Madrid: Fondation Carolina.

Cherkaoui, M. (1974) "Les poids du nombre dans la réussite scolaire", *Revue Française de Sociologie*, 15: 201–215.

——— (1978) "Sur l'égalité des chances scolaires: à propos du rapport 'Coleman'", *Revue Française de Sociologie*, 19(2): 237–260.

——— (1979) *Les paradoxes de la réussite scolaire. Sociologie comparée des systèmes d'enseignement*. Paris: PUF.

——— (1982) *Les changements du système éducatif en France 1950–1980*. Paris: Presses Universitaires de France.

——— (1997) "Le réel et ses niveaux: peut-on toujours fonder la macrologie sur la micrologie?", *Revue Française de Sociologie*, 38: 497–524.

——— (2010) *Sociologie de l'éducation*. Paris, PUF, "Que sais-je", 8th edn.

COSEF (2000) La Charte d'éducation et de formation.

CSE (2009) Rapport analytique du PNEA.

Eicher, J.C, Garboua, L.L *et al.* (1979) *Économique de l'éducation*. Paris: Économica.

Khôi, Le Thanh (1967) *L'industrie de l'enseignement*. Paris: Minuit.

MEN (various years), Les statistiques scolaires.

MEN (1997), "Evaluation de l'impact de certaines variables sur la scolarisation au niveau du deuxième cycle de l'enseignement fondamental en milieu rural", unpublished paper, Rabat.

MEN/UNESCO/IREDU (1997) *L'accès au second cycle de l'enseignement fondamental au Maroc*. Rabat: Imprimerie Al Maarif Al Jadida.

MEN/UNICEF/UNESCO (2001) *Evaluation des conditions d'enseignement et d'apprentissage dans le premier cycle de l'enseignement fondamental*. Rabat: Imprimerie Da Al Karama.

Thonstad, T. analyse et projection des effectifs scolaires dans les pays en développement. Unesco, 1982.

Vaizey, J. (1962) *The Economics of Education*. London: Faber & Faber.

Wagner, D., Spratt, J. (1987) "Cognitive consequences of contrasting pedagogies: The effects of quranic pre-schooling in Morocco", *Child Development*, 58: 1209–1219.

21

EQUITY, EQUALITY AND MICROJUSTICE

Michel Forsé
CNRS, Paris

Traditionally, in the social sciences, the desire to reduce inequalities has been linked with the sentiment of relative deprivation. The mechanism involved was already very clearly observed by Alexis de Tocqueville. Tocqueville took the view that when a social structure is inegalitarian but when every individual's social status corresponds to his or her rank, inequality tends to be accepted. Positions which cannot be attained are not enviable. However, if some individuals depart from the established order, inequality becomes intolerable. The barriers which remain are increasingly unbearable, and the more they are falling, the more widespread equality becomes. In *Democracy in America* (1835–1840, p. 494) he summed up the process in this way: "When inequality of conditions is the common law of society, the most marked inequalities do not strike the eye; when everything is nearly on the same level, the slightest are marked enough to hurt it. Hence the desire of equality always becomes more insatiable in proportion as equality is more complete". Mohamed Cherkaoui (2003) paid great attention to this phenomenon, especially in the case of the French Revolution.

A survey carried out by Samuel Stouffer and colleagues (1949) at least partly shows the empirical validity of this line of reasoning. Their comparative study of two corps in the American armed services after the Second World War came up with a surprising result. All the data at their disposal indicated that the chances of promotion among members of the Air Force were considerably greater than for members of the Military Police; however, during the interviews, some of the first said they were very dissatisfied with their career opportunities, while the second appeared, on the contrary, to be satisfied. Stouffer explained this paradox by introducing the concept of reference group. The airmen compared themselves to those who had been promoted, of which there were a great number in their service and who to an extent defined the career norm. This comparison meant that those who had not been promoted quite naturally felt frustrated which made them express dissatisfaction. The military policemen also compare themselves to the most frequent situation, which in this case involved the group that had not been promoted, which meant that those who did not progress did not feel any frustration and did not say they were dissatisfied.

Of course, the psychological "evidence" for Stouffer's explanation is open to question: why would the reference group necessarily be the largest? Raymond Boudon (1977) thought that a better basis would be the objective possibilities of promotion that are generated by the structures of competition between individuals. When these structures allow individuals to have a hope of being promoted, according to expected utility theory, they lead individuals to invest in what they perceive as allowing them to build a career and enter effectively into competition. However, it is very possible that they will necessarily include losers, who will vary in number according to certain properties of the structures. In this case, it is more an unproductive investment which explains frustration, when the individual was finally unable to attain his or her objective as a result of the structure of competition in place. The outcome was nevertheless never known in advance because, depending on certain characteristics of these structures, an increase in upward mobility can lead either to an increase or a decrease in overall frustration.

Moreover, Cherkaoui (1988) showed that the dependency relationship between intragenerational subjective mobility and the social status individuals consider as just for themselves is complex. A survey conducted in France in 1977 shows that the percentage of people claiming a high status does not vary monotonically according to their perceived mobility. The link is rather curvilinear (U-shaped). Descending mobiles claim (as just for themselves) a high status more frequently than stables or ascending mobiles. The minimum of the parabola corresponds to the stables. And it is also to the stables that corresponds the maximum of the parabola describing the relationship between mobility and the percentage of individuals claiming a low or intermediate status. In addition, individuals claim statuses especially higher as their perceived social position rises.

Be this as it may, W. Garry Runciman (1966) made also the connection with feelings of justice as, even if some objective conditions must be observed, it is quite easy to understand that relative deprivation leads individuals to consider the situation to be unjust. But, by establishing this link, Runciman attempted to show that this frustration should not be considered as being solely "egotistical", involving a comparison between an individual's own situation and that of a reference group, but also "fraternal", insofar as the situation of this group in society as a whole may influence the feeling of frustration and hence injustice. In this chapter we will of course attempt to discover what the data we will analyse reveal about this. We will simply change the terminology in order to talk about *egocentric relative deprivation* in the first case and *solidaristic relative deprivation* in the second. Runciman however went even further in the attempt to find a more generalized explanation for feelings of justice, and devoted a chapter at the end of his book to John Rawls' theory of justice, incidentally five years before the first edition of Rawls' famous book (1971). His theory was not, therefore, yet in its final form, but on the basis of several articles which Rawls had already published, some of its essential characteristics were already apparent. Runciman in particular applied the idea that only those inequalities which cannot be publicly justified are unjust. This makes it possible to include in a "realistic" manner the use of the principle of equality in order to explain feelings of justice, while it would be very difficult to do this if one maintained that in the area of distributive justice application of this principle must always and necessarily lead to total and absolute equality.

All things considered, Tocqueville's principle is still present, but in a complete and integral form. As can be seen in the quotation given above, Tocqueville did not confine himself to explaining the feeling of injustice by relative deprivation. He also maintained that, when there is a link between the two, individuals who are confronted with inequalities adopt the principle of equality which leads them to search for greater levelling as this is the only thing which enables them to reduce the relative deprivation they experience. This is the origin of the "insatiable passion for equality" which, according to Tocqueville, characterizes individuals in democratic societies and which explains why more equality always leads to still more equality.

To what extent can this explanation be considered relevant in the case of the French contemporary data we shall be dealing with here? Put another way, is it that (i) the feeling of microjustice[1] is based more on relative than absolute deprivation; is it that (ii) this deprivation is also solidaristic rather than only egocentric; and is it that (iii) individuals also make use of the principle of equality to express their feeling of justice with regard to their own situation?

To answer these questions, we shall use a representative survey (n = 1,711) conducted in France in 2009 (Forsé and Galland, 2011) on the perceptions of inequalities and the sentiments of justice (now quoted as PISJ). Concerning the issue of income or salaries which concerns us here, the PISJ survey included a question which deals very directly with feelings about microjustice: "would you say that you earn is (1) much more than what you would consider as just, (2) a little bit more than just, (3) just, (4) a little bit less than just, (5) much less than just?" Very few individuals considered that they earn more (3.9%) or much more (0.7%) than they deserve. This, incidentally, is a result which has been observed and explained in a lot of countries (Shepelak & Alwin, 1986: 41). Even if the questions are symmetrical, the answers are always very dissymmetrical. Here, 30.9% of the French consider that what they earn is just, 43.0% that is a little bit less than just and 21.6% that it is much less than just. It is not exaggerated to say that a feeling of injustice strongly prevails in France nowadays.

1. RELATIVE SOCIAL MOBILITY HAS AN EFFECT ON INDIVIDUALS' FEELING OF JUSTICE WITH REGARD TO THEMSELVES

The first thought prompted by the ideas about relative deprivation described above is that an individual's social mobility could affect his or her feelings of justice. As in this case we are concerned with microjustice, the mobility which interests us is primarily, of course, that which individuals effectively feel, that is to say what is normally described as subjective mobility. This does not necessarily coincide with "objective" mobility which is calculated by sociologists by comparing an individual's position on a standard classification grid at two or more dates. A recent study (Duru-Bellat and Kieffer, 2006) has clearly shown that there can be a difference between these two types of mobility and the reasons for this difference. This interview-based study showed that what individuals perceive as a factor of mobility is not necessarily well captured by an analysis of objective mobility. However, of course, if mobility is to influence individuals' feelings of justice in a certain way, they must be aware of it. The PISJ survey had two scales that can be used to evaluate subjective mobility. First, the respondent was asked to identify his or her socioeconomic position on a scale running from 1 (low) to 10 (high). Then the respondent was asked to do the same thing for ten years earlier. An indicator of subjective intragenerational social mobility can be obtained from the difference between the two.

Therefore, those individuals who see themselves as being upwardly mobile consider they are treated justly or more than justly, while those who experience downward mobility feel that they do not have what they deserve; those who consider that they have no social mobility do not show a clear tendency in favour of one opinion or the other. The correlation between the two variables is not very high (0.181) but significant at the 0.01 level.

What is involved here is simply a measure of absolute mobility in which the individual makes a comparison, in a way, just with him- or herself. However, if the effect of this comparison does not seem very important, surely it is because the frustration measured here is not really considered in relative terms which require at least a comparison to something other than oneself. In other terms, would we not obtain a better explanation of the feeling of justice if we were to consider relative social mobility? In order to evaluate this type of mobility, we can begin by regressing the self-reported socioeconomic position today against that for ten years ago. This provides a least squares regression line which gives an estimate of the average gradient of mobility. Individuals whose mobility leads them to place themselves above this line should be considered as experiencing upward mobility, while those whose mobility leads them to position themselves below are experiencing relative mobility which is less upward. Technically, as has been suggested by Bernd Wegener (1991), this amounts to taking the regression residuals as indicators of relative mobility.

The link with the feeling of justice thus agrees with our expectations. Downward relative mobility leads to a feeling of injustice whereas upward mobility makes individuals more likely to believe that they are achieving what they deserve (or more, but as yet seen, very few people are here concerned). But, above all, in this case, the link is stronger than the one observed for absolute mobility. Still significant at the 0.01 level, the correlation coefficient now equals 0.277. Social mobility does influence the feeling of microjustice, but this influence is less if social mobility is considered in itself than if it is considered in relation to average mobility, which of course tends to support an explanation that refers to relative deprivation. Moving upwards or downwards counts, but it counts more when individuals judge their movement in relation to the average slope of social mobility in France. An individual whose mobility is lower than this slope, even if in absolute terms it is still upward, may feel left by the wayside. In order to claim that one earns what one considers as fair, it is necessary to be more upwardly mobile than the overall trend.

The comparison which the individual is assumed to make in this case is, however, fairly abstract. It results from a statistical calculation which assumes, in order to have any meaning, that the individual can compare his or her mobility with that of society as a whole. It is not impossible to imagine that a comparison of this type, at least an approximately one, takes place, for example by assuming that respondents compare their mobility to the average mobility of the people they know or the people they have heard about. But the reference group involved in the literature about relative deprivation is nevertheless more specific. As the above results show that relative deprivation of this type has an effect on the feeling of justice, let us see if we cannot obtain a more satisfactory explanation by identifying this reference group more precisely. We can make the hypothesis that a possible indicator is those persons who exercise the same occupation as the respondent. The question then becomes: does earning less than what respondents think is normal for their profession lead them to claim that they have less than they deserve?

2. FEELINGS OF MICROJUSTICE ARE ALSO EXPLAINED BY SOLIDARISTIC RELATIVE DEPRIVATION

In order to relate an individual's salary with the salary considered to be that of his or her occupation (this question having been asked in the PISJ survey), we shall calculate the natural logarithm of the ratio between these two quantities (Jasso, 1978). In addition, as when making this assessment the respondents are certainly thinking about the salary of an individual working full-time, we must only consider here individuals in this situation. We shall therefore compare the earnings of an individual working full-time with what the same individual considers to be the earnings of other individuals working full-time in the same occupation.

The correlation coefficient with the feeling of justice is now is 0.205 (significant at the 0.01 level). It is more important than the one referring to the effect of absolute mobility but below the level attained by the effect of relative mobility. Of course, generally speaking, earning less than what the respondents consider to be the average for their occupation leads them to state that they earn less than they deserve. But, as the effect of relative mobility is higher, it may indicate that when individuals evaluate microjustice they do not simply make an egocentric calculation. The idea of relative deprivation is clearly at stake, but we need to go beyond the minimum meaning of the term. If we are considering reference to a group, is it not also the way the respondent feels this group is treated within society as a whole that influences his or her feeling of microjustice?

One way of estimating how respondents consider how well their group, in this case the persons who exercise the same occupation, is treated with respect to the rest of society is to calculate the natural logarithm of the ratio between the salary respondents observe for their occupation and the salary which they would consider desirable for it (as respondents were also asked to evaluate this in the PISJ survey). When the salary they observe is below their desired salary, the respondents clearly think that their occupation is badly treated. On the other hand, the closer the two are together, the more the respondents think that what their occupation earns is just. The correlation coefficient (0.158) with feelings of justice is then less important than the ones observed above but still significant at the 0.01 level. So the effect of what we can call solidaristic relative deprivation is not as important as the effects studied before on the sentiments of microjustice but cannot be ignored.

However, is it as important, all other things being equal, as the link observed above between the feeling of justice and the comparison between an individual's salary and that of his or her occupation? We are able to measure the relative weight of these two variables by regressing the feeling of justice against them simultaneously. As shown in Table 1,

Table 1: *Regression of the feeling of justice (values of the standardized beta parameters) by, first, the log of the ratio between the respondent's salary and the respondent's assessment of the salary for his or her occupation and, second, the log of the ratio between this assessed salary and what the respondent considers desirable for this occupation*

	ln (Respondent's salary /Respondent's assessment of the salary for his or her occupation)	**ln (Respondent's assessment of the salary for his or her occupation / Salary respondent desires for this occupation)**
standardized beta coefficient	0.219	0.181
t	5.565	4.608
significance	< 0.001	< 0.001

Source: PISJ 2009.

which sets out the values of the parameters for this regression, the second ratio, which does not directly involve the individual's salary, has a significant impact on the feeling of justice.

The feeling of microjustice is therefore significantly affected by the way the reference group is treated by society. Respondents do, of course, compare themselves to this group, but not only. The individual's feeling of justice is the outcome of a more generalized standardized type of judgment. There are good reasons for this: after all, what is the point of being well positioned in your group if your group is badly underestimated by society?

Previously, the feeling of justice appeared to be affected above all by relative mobility. We should therefore try to find out if this generalized thought process still appears in regressions that simultaneously involve relative mobility and solidaristic relative deprivation. Table 2 shows that the same ranking applies that we have observed above. Relative mobility is at a higher level than the comparison between the perceived and desired salary for one's occupation, but this comparison still provides, all things being equal, a significant explanation of feelings of microjustice. We can therefore not be satisfied with an explanation that refers only to a "standard" or egocentric relative deprivation. Even

Table 2: *Regression of the feeling of justice (standardized beta parameters) against the respondent's relative social mobility and the log of the ratio between the salary the respondent observes for his or her occupation and the salary he or she indicates would be desirable for it.*

	Relative mobility	**ln (Respondents assessment of the salary for his or her occupation / Salary respondent desires for this occupation)**
standardized beta coefficient	0.263	0.135
t	6.730	3.451
significance	< 0.001	0.001

Source: PISJ 2009.

if this obviously play a part, the feeling of justice seems to depend also on the way individuals assess the economic lot of their group (in this case those who exercise the same occupation as them).

3. THE FEELING OF MICROJUSTICE BRINGS INTO PLAY THE GENERAL PRINCIPLE OF EQUALITY

Would it be possible to extend this generalization even further and ask whether the feeling of microjustice might not also be linked with the perception of excessive inequalities in France? One of the questions in the PISJ survey seems particularly apposite in this connection. Respondents were asked if they thought that income inequalities were high in France (answering on a scale running from 1 (for "very low") to 10 (for "very high"). The average response is 7.87. From the perspective of equality it is therefore clear that a large majority of the French feel they live in an unjust society. In the BVA-DREES survey of 2006, 78% of the respondents gave a negative answer to the question "is French society just?" (Forsé and Parodi, 2006b). Nearly the same is observed in the 2009 PISJ survey. In passing, it is worth noting that it is therefore quite surprising to find scholars such as Melvin Lerner (1982) or more recently Roland Bénabou and Jean Tirole (2006) who hold that people have a strong "need" to feel they live in a just world.

In this context, the correlation coefficient, which here amounts to 0.101 (significant at the 0.01 level), shows that the perceived extent of economic inequalities has a very clear effect on the feeling of microjustice (the more this perceived extent, the more the feeling of unfairness).

This role of the principle of equality is not in conflict with solidaristic frustration. If the feeling of justice is regressed simultaneously by our indicator for solidaristic relative deprivation and the perception of inequalities, the parameters that measure the scale of their impacts are both significant (see Table 3).

This effect of the principle of equality must be given due importance because while one can easily imagine that some individuals judge overall distributive justice on the basis of their perception of the extent of macrosocial inequalities, the aim here is for the individual to evaluate the justice or injustice of his or her own economic position. The PISJ

Table 3: *Regression of the feeling of justice (standardized beta parameters) by, on the one hand, the log of the ratio between the respondent's assessment of the salary for his or her occupation and that which the respondent desires for this occupation and simultaneously, on the other hand, the respondent's answer to the question about whether income inequalities are high in France (on a scale running from 1 for "very low" to 10 for "very high")*

	ln (Respondents assessment of the salary for his or her occupation / Salary respondent desires for this occupation)	**Perception of income inequalities**
standardized beta parameters	0.121	0.089
t	4.584	3.367
significance	< 0.001	0.001

Source: PISJ 2009.

survey shows that the responses are linked to the fact the respondents think that their efforts at work are not fairly rewarded. They also tend to think that it is not only the case for themselves but in France in general. However, in order to make a judgment about the application of the principle of equity to their own case, respondents refer not only to relative "solidaristic" frustration, but go further by also asking themselves if the principle of equality is applied macrosocially.

The principle of equity differs from the principle of equality insofar as equality involved here is "geometric" whereas it is "arithmetic" when the principle of equality is at stake. Equity requires an equality of proportions between inputs (I) and outputs (O). If a and b are two persons, there is equity if and only if: $Ia/Oa = Ib/Ob$. Generally, I is considered to reflect individual's merits. These merits can be defined very differently by people, but equity always means that rewards (O) should be strictly proportional to individual merits. Of course, it follows that there will be different levels of rewards (e.g. salary) and that the situation will not fit a perfect arithmetic equality. With the PISJ survey, we see that the French define merit principally as efforts at work. For them, a fair reward (level of salary) should be proportional to these efforts, but it is not the only framework of reasoning they endorse.

Their position can rather be seen as the outcome of a "reflective equilibrium" between equity and equality, which is, incidentally, quite easy to understand. If unequal merit must be given an economic reward, inequality necessarily arises. But if this inequality goes beyond what is required in order to simply apply equity (which itself should not already infringe other principles as we shall see below), it must be reduced. Put another way, the remuneration of merit by the inadequately corrected play of market forces would lead to excessive inequality which should be reduced by redistribution on the basis of the principle of equality. However, four conditions must be satisfied in order for us to accept that the respondents actually follow this line of reasoning. We shall now attempt to see to what extent they are met in the data.

3.1 Equality and equity are not mutually exclusive

First of all, the perception of large inequalities should not be opposed to the idea that individual merit or effort should be taken into account in order to decide on a just salary. This is the situation we observe here.

When asked to decide on the important factors which should be taken into account in order to determine the correct level for earnings, the respondents tended to favour "equitable differentiation" and think that greater importance should be given to their efforts at work or their merits, rather than to prior investment at school (diplomas). This is the way they understand equity. As Table 4 shows, for deciding on a just salary, 85% of the French approve the principle of merit but they understand this merit as efforts at work rather than an effect of the educational level. However, the data also show that equity is not the only criterion of justice that individuals consider. Let us stop to consider this important point for a moment.

In theoretical and empirical research, particularly in the area of social psychology, equity has frequently been represented as being the principal model to be satisfied (Adams, 1965; Homans, 1974). In order to talk of distributive justice it was necessary to ascertain that, in one concrete way or another, a division applied relative equality between each individual's contributions and rewards, in other words, that the merit of each individual was recognized and given a proportionate reward. A considerable number of studies (Tyler *et al.*, 1997) have applied this point of view, with some outstanding successes. For example, they have established that when employees have a clear idea of what constitutes a just reward for their work, those who receive this level of remuneration are considerably more satisfied not only than under-paid employees, which goes without saying, but also than overpaid employees, who find it somewhat disconcerting to find themselves arbitrarily favoured (Pritchard, Dunnette and Jorgenson, 1972). Nevertheless, the shortcomings of the theory of equity quickly became apparent when the attempt was made to define what was meant by a just distribution. With the exception of simple cases, it is generally difficult to decide what constitutes a deserved salary. Moreover, it appeared that, depending on the situation or the circumstances, individuals sometimes give preference to other criteria. Morton Deutsch (1985) in particular, but also other scholars such as Jennifer Hochschild (1981) and David Miller (1999), have clearly shown, on the basis of a large variety of data (experiments, surveys, etc.) that two other principles of applied distributive justice apart from equity were supported by respondents: meeting the basic needs of everybody, and equality.

In a previous paper (Forsé and Parodi, 2006a) I have analysed surveys conducted in each country in the European Union in the framework of the 1999 *European Values Survey* (EVS) in order to show that these three major principles, which meet with very broad approval by Europeans, do not define local or exclusive spheres of social macrojustice. Europeans (and the French are no exception) consider that satisfying everybody's basic needs (food, housing, clothing, education, health), rewarding individual merit and eliminating major income inequalities are positively correlated criteria that are ranked in the order we have just listed them in, and which thus have a "lexical" form, to use the term applied by Rawls (1971).[2] Far from defining competing spheres of justice, need, merit (equity) and equality are very clearly perceived by Europeans as legitimate and complementary criteria and there is a strong consensus about their ranking in this order. Even if it is not possible to examine this order of priorities here, the PISJ data provide confirmation that these principles are neither rejected nor held in opposition to one another.

Table 4: *Answers to questions about what should be important for distributive justice*

	Fully agree	Rather agree	Rather disagree	Fully disagree
Basic needs should be guaranteed for all (food, cloth, housing, education, health)	67%	28%	4%	1%
Reducing the gap between low and high incomes	52%	37%	7%	4%
Total equality of all incomes	12%	20%	38%	30%
Income differences should not be avoided if they reward different merits	26%	59%	10%	5%
Efforts at work should be best rewarded	49%	46%	4%	1%
Diplomas should be best rewarded	15%	36%	36%	13%

Source: PISJ 2009.

Table 4 shows an important consensus about satisfying basic needs (95% of respondents agree), reducing income inequalities (89%) and rewarding merits (85%). But above all, it must be emphasized that 82% of the respondents agree *simultaneously* with these three opinions.

It is therefore clear that equity and equality are not mutually exclusive. Moreover, as we have summarized from an analysis of the EVS data, they are in a hierarchy. For the Europeans at least, equality is less important than rewarding merit, and merit is less important than meeting everybody's basic needs. All in all, they remind us that if the principle of equity comes before that of equality, one does not apply without the other. If there is a hierarchy we must apply all the principles not just the most important.

3.2 The principle of equality is not applied absolutely because it is not applied on its own

This brings us directly to the second condition which must be met in order for us to establish that the respondents applied the principle of equality when assessing whether their earnings were just. If their view is based on equity but does not exclude equality, the first criterion merely taking precedence over the second, the equality in question should not be understood as the attempt to achieve absolute equality of income. If it does involve this attempt its implementation would conflict with the (uncontested) relative equality implied by equity. In connection with this, other studies (Kelley and Evans, 1993), using the data from different ISSP surveys (International Social Survey Programme) which asked the question directly, have already shown clearly that absolute equality of this type is strongly rejected in all the surveyed countries. The principle of equality must not be interpreted too strictly. More than the search for absolute equality, it expresses the desire to reduce excessive income inequalities, irrespective of everybody's merit or effort which it is accepted should be taken into consideration. As Table 4 shows, the same applies in the case of the PISJ survey where a large majority approves the reduction of economic inequalities but disapproves a total equality of all incomes.

Thus, the respondents hold the view that all inequalities are not unjust. In this they are not alone. Rawls (1971), for example, while firmly supporting the principle of equality that applies in a democratic society against the principle of merit that applies in a meritocratic society, states that only those economic inequalities that are to the disadvantage of the least favoured are unjust. The reason they are unjust is that they could not be justified to anyone, either the most advantaged or the least fortunate individuals. In exactly the same way we can observe that they could not be the matter of a unanimous agreement (Forsé and Parodi, 2004) or that they could not be part of the social contract or be chosen behind a veil of ignorance, or, to return to Kant's categorical imperative (1785), which each of these formulations applies in its own way, they would not be reasonable or moral because the subjective maxim on which they are based could not be universalized and generalized. In the distributive or economic sphere (but not of course the sphere of rights), a coherent theory of justice can perfectly well include a degree of de facto inequality, on condition that this inequality does not go beyond what could be justified to everybody in which case it would be outside the bounds of what is reasonable.

Here, by maintaining that inequalities should be reduced when they exceed what is permitted by a strict application of the principle of equity, the respondents seem to be adopting a line of reasoning which is compatible with this idea of a limit. There is, of course, no consensus so there is some discussion about the state of inequalities, the extent to which it would be desirable to reduce them, as there would certainly be too about where the level should be. However, this does not prevent any of the protagonists in the debate from adopting this idea of a limit, thereby employing the principle of equality in a way that is not too strict.

3.3 Inequalities are considered to be important when effort is not rewarded

Under these circumstances, if individuals think that the principle of equality is not being applied correctly, they may, quite consistently, come to the conclusion that they are not earning what they deserve. The difference between their income without a reduction in excessive inequalities and what they consider it should be after such a reduction is quite simply considered to be too large for the individuals to declare they are justly treated. This must naturally lead them to consider, by aggregation or generalization, that effort is not usually sufficiently rewarded in their country. Redistribution of incomes would not be sufficient to allow them to speak of everybody's effort, and therefore their own too, being rewarded fairly. This is the third hypothesis which must be verified in order to be able to conclude that the respondents also employ the principle of equality when assessing their own economic position. Once again, the hypothesis is confirmed by the data.

What is involved here is not, as it was before, asking whether effort is a criterion that should be taken into account when deciding on a just salary, but asking oneself whether effort is actually rewarded in France. Yet only 38% of the French, in the PISJ survey, think it is the case. A majority (57%) thinks diplomas are actually more important to decide on the level of a salary and considers it should be the reverse (efforts preceding diplomas). Moreover, the less individuals think efforts at work are actually rewarded in France, the more they think income inequalities should be reduced. A cross-tabulation between the two variables shows that the correlation is both very significant and negative, which provides clear support for the idea that the more individuals think that economic inequalities are too large and that they should be reduced, the more they believe that their current state is not one which shows effective reward for merit or effort in their country, and, ultimately, in their own case.

3.4 The feeling of microjustice is linked to the feeling of macrojustice

The very last words in the preceding sentence, which implies a transition from macro to microjustice, requires us to make one final verification. What sort of link, if any, is there between thinking that what one earns does or does not correspond to what one deserves and thinking that, generally, effort is or is not correctly rewarded in one's society? In this last case again, the results clearly agree with the assumption we have just made about the link between the two variables. The strength of this link is significant and always clearly shows that the more individuals think that effort is not well rewarded in France, the more they tend to claim that their earnings do not reflect their own efforts.

Ultimately, it is straightforward to reach a conclusion. The four hypotheses which we had to make in order to maintain that respondents apply a generalized principle of equality in order to make a judgment about the equity of their own economic situation have been verified.

CONCLUSION

What we observe is the complete application of Tocqueville's ideas. Relative deprivation, which is responsible for a feeling of personal injustice, leads individuals to adopt a principle of equalization which for Tocqueville in particular, but also for Rawls, is characteristic of democratic societies. However, as far as its effect on the feeling of microjustice is concerned, this frustration appears here to be more relative than absolute, and it turns out to be also solidaristic rather than only egocentric. With this solidaristic deprivation, individuals are generalizing their thought process (taking into account the way their reference group is treated). But they take this generalization even further, also linking their feeling of microjustice to the extent of the inequalities they perceive in their society. In other terms, the feeling of justice with regard to oneself is not strictly and only a personal matter.

In the domain of macrojustice, rewarding merit and equalizing conditions are not mutually exclusive. This also applies to the evaluation of microjustice as, even when it is based on the idea that individual merit should be rewarded, it is generally ultimately modified on the basis of how the respondents think the principle of equality is applied in France. Often, therefore, it is difficult to think that one's own situation is just when one is living in a world one considers to be generally speaking unjust.

As analysis of other surveys in many countries has shown (Forsé and Parodi, 2006a) that, while individuals accept that rewards should be proportional to individual merit, this is on condition that other *a priori* conditions have already been met, for example equality of opportunity, and that the principles of applied justice which are considered to have priority, such as the need to meet the basic needs of everybody, are not violated. However, under these conditions, large inequalities of income which go beyond what is required just to apply the principle of equity appear to be unjust.

NOTES

1. Microjustice involves just one individual (or a small group of individuals) while macrojustice involves a much larger entity, such as an entire society. This distinction (Brickman *et al.*, 1981) is worth making because *a priori* the two are not necessarily congruent. Individuals can feel unjustly treated while thinking that the society they live in is generally just or, conversely, feel that they live in an unjust world while thinking that they personally are well treated.
2. Some claims must be satisfied in priority, and only when this has been done can we turn to the others. Rawls (1999, §23, p. 115) saw this very clearly: "[A conception of right] must impose an ordering on conflicting claims. This requirement springs directly from the role of its principles in adjusting competing demands" This formal constraint is one of the five (the others being universality, generality, publicity and finality) which he held must be obeyed by any theory of justice; he did not fail to apply it to his own by imposing an ordering of this type on the three principles it contained. Amartya Sen (1992) also stressed the importance of ordering for a theory of justice, which is the reason he extended utilitarianism by placing the maximization of ends within a hierarchy of ends.

REFERENCES

Adams, J. S. (1965) "Inequity in Social Exchange", in Berkowitz L. (ed.), *Advances in Experimental Social Psychology*, vol. 2. New York, Academic Press, pp. 267–299.

Bénabou, R., Tirole, J. (2006) Belief in a Just World and Redistributive Politics", *The Quarterly Journal of Economics* CXXI(2): 699–746.

Boudon, R. (1977, Engl. tr. 1986) *Theories of Social Change: A Critical Appraisal*. Berkeley, CA: University of California Press.

Brickman, P., Folger, R., Goode, E., Schul, Y. (1981) "Microjustice and Macrojustice", in Lerner M. J. and Lerner S. C. (eds), *The Justice Motive on Social Behavior*. New York: Plenum, pp. 173–204.

Cherkaoui, M. (1988) "Mobilité sociale et équité", *Revue Française de Sociologie* 29(2): 227–245.

——— (2003) "L'État et la Révolution, Logique du pouvoir monopoliste et mécanismes sociaux dans *L'Ancien Régime* de Tocqueville", *The Tocqueville Review / La Revue Tocqueville* XXIV(1): 163–187.

Deutsch, M. (1985) *Distributive Justice, A Social-psychological Perspective*. New Haven, CT: Yale University Press.

Duru-Bellat, M., Kieffer, A. (2006) "Les deux faces—objective / subjective—de la mobilité sociale", *Sociologie du Travail* 48: 455–473.

Forsé, M., Parodi, M. (2004, Engl. tr. 2005) *The Priority of Justice, Elements for a Sociology of Moral Choices*. Bern: Peter Lang.

——— (2006a) "Justice distributive: La hiérarchie des principes selon les Européens", *Revue de l'OFCE* 98(July): 213–244.

——— (2006b) "Les opinions sur les politiques sociales: une stabilité globale", *Etudes et Résultats* 532(October).

Forsé, M., Galland, O. (eds) (2011) *Les Français face aux inégalités et à la justice sociale*. Paris: Armand Colin.

Heider, F. (1958) *The Psychology of Interpersonal Relations*. New York: Wiley.

Hochschild, J. (1981) *What's Fair? American Beliefs about Distributive Justice*. Cambridge, MA: Harvard University Press.

Homans, G. (1974, revised edn.) *Social Behavior: Its Elementary Forms*. New York: Harcourt Brace Javanovich Inc.

Jasso, G. (1978) "On the Justice of Earnings: A New Specification of the Justice Evaluation Function", *American Journal of Sociology* 83(6): 1398–1419.

Kant, E., 1785, tr. Engl. 2002, *Groundwork for the Metaphysics of Morals*. New Haven, Yale University Press.

Kelley, J., Evans, M. D. R. (1993) The Legitimation of Inequality: Occupational Earnings in Nine Nations", *American Journal of Sociology* 99(1): 75–125.

Lerner, M. (1982) *The Belief in a Just World: A Fundamental Delusion*. New York: Plenum.

Miller, D. (1999) *Principles of Social Justice*. Cambridge, MA: Harvard University Press.

Pritchard, D., Dunnette, M. D., Jorgenson, D. O. (1972) Effects of Perceptions of Equity and Inequity on Worker Performance and Satisfaction", *Journal of Applied Psychology* 56: 75–94.

Rawls, J. (1971, rev. edn., 1999) *A Theory of Justice*. Cambridge, MA: Harvard University Press.

Runciman, W. G. (1966) *Relative Deprivation and Social Justice*. London: Routledge and Kegan Paul.

Sen, A. (1992) *Inequality Re-examined*. Oxford: Oxford University Press.

Shepelak, N. J., Alwin, D. F. (1986) Beliefs about Inequality and Perceptions of Distributive Justice", *American Sociological Review* 51(1): 30–46.

Stouffer, S. A., Suchman, E. A., DeVinney, L. C., Star S. A., Williams R. M. (1949) *The American Soldier: Adjustment During Army Life*, vol. 1. Princeton: Princeton University Press.

Tocqueville, A. de (1835–1840, Engl. tr. 2003) *Democracy in America*. Washington, DC, Regnery Gateway.

Tyler, T. R., Boeckmann, R. J., Smith, H. J., Huo, Y. J. (1997) *Social Justice in a Diverse Society*. Boulder, CO: Westview Press.

Wegener B. (1991) "Relative Deprivation and Social Mobility: Structural Constraints On Distributive Justice Judgments", *European Sociological Review* 7(1): 3–18.

22

SOCIAL MOBILITY, PRECARIOUSNESS AND POLITICS IN 2012

Nonna Mayer
Centre d'Études Européennes de Sciences Po—CNRS

This paper revisits the relation between social mobility and politics in France in the last presidential election. Combining national post electoral survey data and in depth interviews among socially vulnerable populations living on welfare and income support benefits (RSA: Revenu de Solidarité Active), it focuses on the relation between subjective downward social trajectories, precariousness and votes in the 2012 presidential election, particularly votes for the far right.

In 1995, Mohammed Cherkaoui co-edited with Louis-André Vallet a special issue of the *Revue Française de Sociologie* assessing the state of the art in social mobility research, in which two articles explored the electoral behaviour of mobiles in France from different perspectives. Bruno Cautrès relied on survey data and log-linear modelization, inspired by the pioneer work of Michael Sobel and his "diagonal" model, comparing the votes of the mobiles to the non-mobiles of their class of origin and of destination (Cautrès, 1995). While Mohammed Cherkaoui opted for a more speculative approach, considering a priori and in abstracto all political effects of social trajectories possible. He was reacting to "the simplism of certain theories reducing the complexity of social mobiles behaviour to median behaviours, which actually are but a non-prevailing particular case" (Cherkaoui, 1995: 182). The tenfold taxonomy of the relation between mobility and votes he produced intended "to shatter the naïve belief in the existence of a behaviour expressing the effect of mobility per se" and pinpointed the need for "a systemic approach" encompassing every type of action", considering that "any essentialist definition of behaviour will lead to paralogisms: there is no more conformism than hyperconformism, rebellion or political apathy in itself" (ibidem).

Keeping his warnings in mind, this chapter proposes to revisit the relation between social mobility and politics in France, some twenty years later. Since Cherkaoui wrote these lines, social mobility trends have changed. At that time, on the base of a careful study of father- son and father- daughter social mobility tables drawn from the FQP (Training and Occupational Skills) large scale surveys (1953–1993), Louis-André Vallet concluded that a slow but continuous increase in upward social mobility had occurred over the last forty years. Now it is the opposite. The generations born at the turn of the sixties are more often experiencing downward mobility, as shown by Louis Chauvel (1998) and more recently by Camille Peugny (2009, 2013). On the base of the same FQP survey the latter shows convincingly that the children of managers and business owners born between 1953 and 1957 are, at mid career, in a lower position than their father. Conversely, the probability to move up the social ladder is becoming more difficult for children of workers and of routine non-manual clerical employees. While the baby boomers benefited from economic growth, full employment, high wages, unprecedented educational boom, improved social protection, good housing, the next generations face hard times, devaluing of high school degrees, mass unemployment, housing shortage. It's not at all the same to enter the job market in 1968 and in 1998 (Baudelot & Establet, 2000). Today a majority of French people are afraid of a drop in status, for them and for their children.

Besides the continuous rise in the level of unemployment, hitting new records in the aftermath of the 2008 financial crisis,[1] the development of precarious employment and "lousy jobs" (Castel, 2003; Goos, Manning, 2007), paying low wages, offering few benefits, with no long-term security, is feeding not only the fear to move down the social ladder, but to fall off it, to be socially excluded, to become part of the poor. The proportion of people below the poverty threshold defined as 60% of the median income, which was 14.5% in 1996, had dropped to 12.9% in 2002, 12.6% in 2004. Since then it has been steadily rising, up to 14.1% in 2010, that is to say 8.6 million people. A far larger proportion of the French people think this could happen to them. In a recent survey[2] three out of four have the feeling that either themselves or their family and friends, might experience precariousness (losing one's job, getting into debt, becoming homeless) one of these days: 30% of the respondents see it for certain, 45% as likely to happen. The total proportion rises to 82% among the labour force, and 87% among the manual working class.

1. DATA AND INDICATORS

To take these changes into consideration we shall focus on subjective social mobility, the way people perceive and evaluate their social position and its evolution and more specifically perceived downward mobility. Compared to their families, how many see themselves in a lower position, moving down the social ladder or even falling off, drifting down into precariousness and poverty? The subjective facet of mobility is far less explored than the objective one, with the exception of some pioneer work (Duru-Bellat & Kieffer 2008; Attias Donfut & Wolff, 2001). Yet the few existing studies show interesting discrepancies between real positions and the way they are perceived, with actually a tendency to overestimate upward mobility, and to a lesser degree, downward mobility, in both surveys. These perceptions could matter politically as much, if not more, than the objective mobility indicated by the occupational shifts between parents and children. Besides, considering the massive change in the occupational structure brought about by deindustrialization, expansion of the service sector, development of insecure jobs and mass unemployment, mere occupations, especially as captured by the old occupational class schemes, do not tell us much about actual social status.[3]

To tackle this subjective mobility in today's France we will draw from two sets of data, collected for our project on "Poor People Vote"[4] . The first is the French Election Study 2012 on "The political economy of voting", a post electoral survey conducted from May 9 to June 9 with face to face interviews, on a national random sample of 2014 respondents representative of the French population registered on the electoral lists in metropolitan France.[5] These were important elections, the first national ones since the beginning of the 2008 financial and economic global crisis, more mobilizing. Besides the usual political and socio-demographic indicators the survey had two questions allowing to construct an indicator of subjective mobility, asking about the respondents self placement on a ten point social ladder, and then asking them to locate their family, on the same scale:

> In our society there are people who are at the top of the social ladder and others who are at the bottom of it. Here is a scale that goes from top to bottom. Where would you place yourself on this scale? And thinking about the family in which you grew up, where would you place it on this scale?" (on the screen appears a vertical ladder where 10 indicates the highest position (marked "top") and 1 the lowest (marked "bottom"), here recoded from 1 to 10).

The survey also comprised a standard indicator, the score EPICES (Evaluation de la Précarité et des Inégalités de santé pour les Centres d'Examens de Santé), at the heart of the "Poor People Vote" project. It was devised by the Social Security health centres to detect situations of social vulnerability or "precariousness" more precisely than by just relying on income or occupation (Labbé *et al.*, 2007). It combines 11 questions about perceived financial difficulties, deprivation of elementary goods as defined in the EU–SILC project (European Statistics on Income and Living Conditions), social coverage, relations with family and friends, leisure time, etc. It allows us to classify the respondents on a gradient of precariousness from 0 to 100 and to evaluate the importance of this phenomenon in today's France. A person with a score of 30 or above is considered as socially precarious. If one extrapolates from our sample, in 2012, 36.4 % of the potential voters, registered to vote in metropolitan France, can be considered precarious, a proportion more than twice superior to the proportion of monetary "poor" people.

The EPICES score*

1. Do you sometimes meet a social worker? (+10.06)
2. Do you have a complementary health insurance (–11.83)
3. Do you live with a partner? (–8.28)
4. Do you own your apartment (house)? (–8.28)
5. Are there periods in the months during which you meet real financial difficulties in coping with your needs (food, rent, EDF etc..)? (+14.80)
6. Have you come to play sports over the last 12 months? (–6.51)
7. Did you go to the movies, to the theater or any other performances over the last 12 months? (–7.10)
8. Did you go on vacations over the last 12 months? (–7.10)
9. During the last 6 months, have you been in contact with family members other than your parents or children? (–9.47)
10. If a problem were to occur, are there people around you on whom you could rely that could host you a few days if necessary? (–9.47)
11. If a problem were to occur, are there people around you on whom you could rely that could bring you material assistance? (–7.10)

— Constant (75.14)

*In brackets the weight applied to each answer to sum at 100.

The second set of data consists in participant observation and semi directive interviews, conducted with some 120 persons on welfare, selected via charities and social services providing shelters and residence for the homeless or distributing food and clothes (Petits Frères des Pauvres, Croix Rouge, Secours Islamique, Ozanam, Saint Vincent de Paul), in Paris and its suburbs (Seine Saint Denis), Bordeaux and Grenoble, two weeks before the first round of the presidential election.

They were asked what they thought of the coming elections, of the candidates, what they expected, if they would vote. They told us the story of their lives and what they were before they lost their job, their home, their spouse, before they "fell".

The project was about the political effects of precariousness, not social mobility per se. Does falling down the social ladder feed political apathy like among the unemployed of the thirties described by Paul Lazarsfeld, Marie Jahoda and Hans Zeisel (1932)? Does it on the opposite encourage revolt and rebellion, these moments of madness described by Frances Fox Piven and Richard Cloward in *Poor People's Movements* (1978)? Or does it breed political extremism, of the left but maybe even more of the right, with the new dynamic given to the Front national by its new leader Marine Le Pen, who took sides explicitly during her campaign for the little people, the invisible, the forgotten ones, crushed by the recession? However one can extend these hypotheses to the effects of downward social mobility. That's what suggests the study of Peugny linking social trajectories, values and party proximity in the 2002 presidential election, where Le Pen qualified for the second round. The downwardly mobile (from the upper service class to working class and routine non-manual employee positions) appear more authoritarian, more ethnocentric than the non-mobile of same origin or the upwardly mobile. They also combine economically interventionist attitudes, in favour of a strong protective state, with a violent rejection of the "assisted" who live on social benefits. And this complex set of values brings them closer to the Front national (Peugny, 2006).

With the help of these two sets of data one can evaluate the importance of downward subjective mobility, defined as the difference between the perceived positions of self and family, in the electoral population in 2012, and its impact on electoral behaviour. And one can see precariousness as the utmost form of downward social mobility in a context of recession which makes it more likely to occur.

2. SUBJECTIVE MOBILITY

To place oneself and one's family on a social ladder graded from 1 to 10 is something that most respondents are willing to do, with a rate of

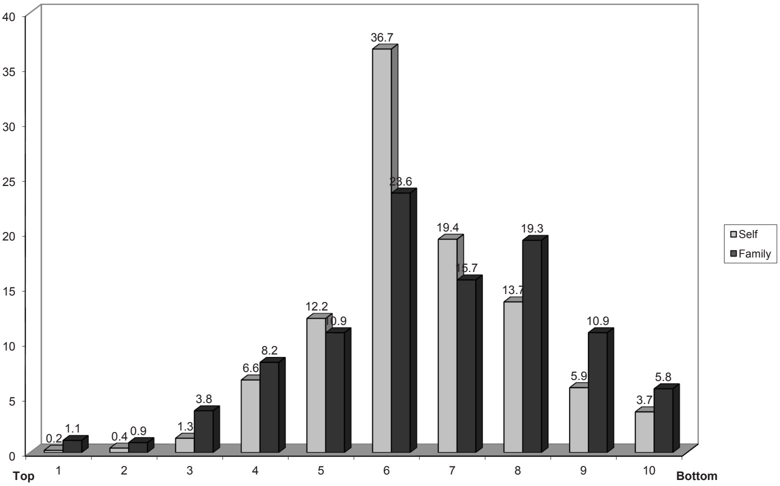


Figure 1: *Position of self and family on social ladder*

answer to the question of respectively 99% and 98%. Their answers evoke a Gaussian bell curve, with few at both extremes and the majority in the middle positions. But the distribution is slightly deported to the right, towards the lower positions on the graph (figure 1, in grey). The mean of the distribution is 6.4, the median 6. There are many more respondents at the very bottom (23% in the 3 lower positions, 1–3) than in the top positions (2% in positions 1 to 3). This self positioning is correlated with the other indicators of social position such as income, occupation, education, wealth, and precariousness. The proportion of those who see themselves in the lower rungs varies from 36% among the manual workers to 6% among the upper service class, from among 40 % in the lowest quartile of incomes to 5 % in the highest, from 34% among respondents who only went through primary school to 8 % among those who went through post graduate studies, and from 10 % in the first quintile of the non-precarious to 43% in the top one.

If one now looks at their image of the family in which they were brought up, it's the same type of curve, but more deported to the right, with the mean at 6.6 and the median at 7 (figure 1, in black). The respondents less often choose position 6, to the benefit of lower or upper positions. On the one hand, their family is more often located in the three bottom positions, as lower than their own (by 36% versus 23%). On the

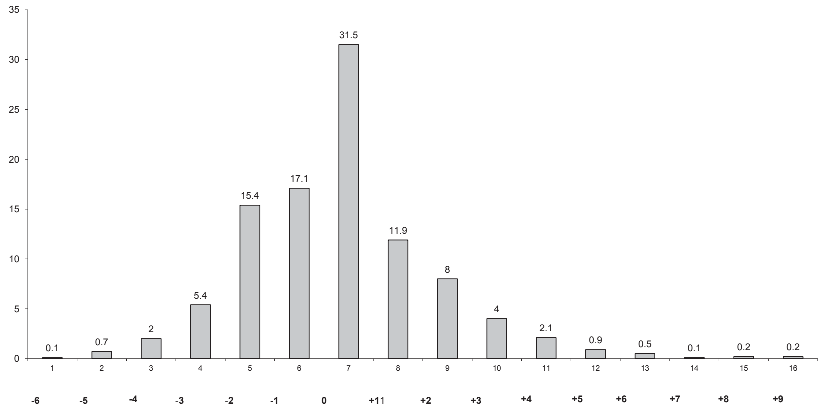


Figure 2: *Perceived difference between positions of self and family on social ladder*

other hand it is also more often seen in the four top positions (14% versus 8.5%). It fits with what Mendras called the "moyennisation" of French society, and the increase in identification with the middle class, shared now by a majority of the population, while in the sixties belonging to the working class still came first.[6]

To get an idea of the way the respondents see, individually, their social trajectory since childhood, one can construct a simple indicator combining the answers to these two questions. Are considered as stable all the answers in the diagonal, when respondent and family have the same location, that is 31.5% of the sample (figure 2). Are considered upwardly mobiles those who see their position as higher than their family (negative numbers on the left of the figure), and downward mobiles those who see it lower (positive numbers), whatever the distance from the initial position. The climbers are 41% of the sample, it's the largest group. The droppers are 28%.

The indicator subtracts from the score of the respondent on the social scale the score of his family. If for instance both are in position 5 the indicator takes the value 0, indicating stability. If the respondent's score is 5 and his family 4, the value is +1, indicating a downward trajectory. If the respondent's score is 4 and his family 5, it takes the value –1, indicating upward mobility. The average distance is a little over 1 (1.36).

Table 1: *Subjective social mobility in 2003 and 2012*

	Upward	Stable	Downward
2003	50 [31]	27 [58]	23 [11]
2012	41	32	27
Difference	−9	+5	+4

Male population only. FQP survey 2003 [in brackets the rate of objective mobility], French Election Study 2012.

An element of comparison for these figures is given by the above mentioned study by Marie Duru-Bellat and Anne Kieffer. It compared objective occupational mobility between fathers and sons based on the 2003 FQP survey, reduced to five categories (sharply upward, upward, stable, downward, sharply downward) to the answers given to an open question in the same survey asking the respondents if they found their present social situation much higher, higher, about the same, lower or much lower than their fathers (Duru-Bellat, Kieffer, 2008:). They found that respondents tend to overestimate their trajectories, half of them thinking of themselves as upwardly mobile while the FQP mobility tables gave a figure of 32%, and 23% seeing themselves as downwardly mobile instead of 11%. The authors restricted their study to the male population for reasons of comparability. If we do the same with our data, we see that the perceived upward mobility is lower by 9 points, while downward mobility is higher by 4 points and perceived stability by 5 points (table 1).

Moving up or down has not the same meaning nor the same frequency according to the location of the person on the scale and her social and cultural characteristics. It's clear that the lower the perceived position, the higher is the feeling of social descent. The proportion of subjective downwardly mobiles rises from 3% in the three top positions to 58% in the two bottom ones, while conversely the feeling of moving up the social ladder drops from 67% to 11% (figure 3).

As for the other variables associated to social position, gender makes no statistically significant difference. In spite of the persisting gender inequalities as far as occupations, wages and social positions

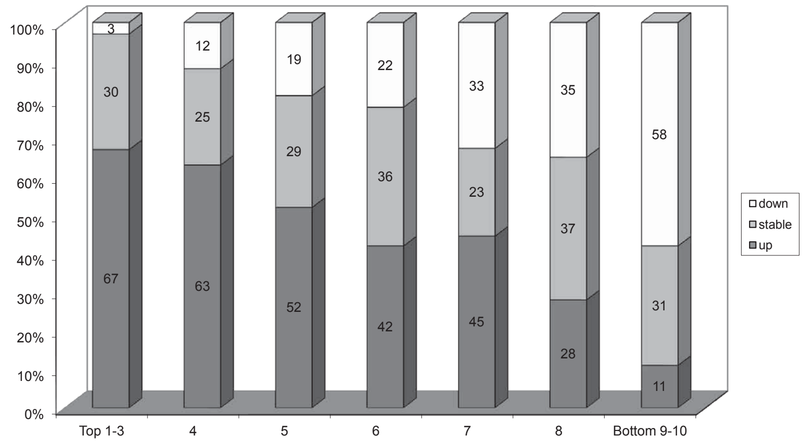


Figure 3: *Subjective mobility by self position on social scale*

are concerned, women hardly feel more often downwardly mobile than men. Age has a significant impact. The feeling of being upwardly mobile rises regularly as one moves from the younger to the older respondents, from 15% before the age of 25, to 53% after 65 years, while the feeling of drifting down the social scale falls from 35 to 18%. It's not only because making a position in life takes time. It seems there also is a generational effect, as outlined by Peugny and Chauvel, making achievement more difficult for the post baby boomers. Education also matters but the relation with subjective mobility is not linear. The proportion of upwardly mobile is higher at both ends, among those who never went further than primary school, the self made ones, and among the most educated, while the feeling of downward mobility reaches its highest levels among the respondents with a little education, but not enough to succeed, those who have been to high school but did not pass the baccalaureate, the necessary sesame to have a job today. As far as occupations are concerned the feeling of downward mobility reaches its highest levels among the self employed- shopkeepers, artisans and farmers- on the one side, among manual workers on the other (respectively 34 and 32%). The economic variables have the greatest impact. It's among people with low incomes, no asset, precarious jobs or no job at all that the level of downward subjective mobility is by far the highest. It hits

Table 2: *Subjective mobility by score on the EPICES index of precariousness*

Precariousness	Subjective social mobility						
by quintile	Up	Stable	Down	↓	Up	Stable	Down
1	60	25	15	100	30	16	11
2	48	31	21	100	19	17	13
3	37	34	29	100	20	23	22
4	33	35	32	100	15	20	21
5	27	33	40	100	16	24	33
				→	100	100	100

French Election Study 2012.

a record level of 49 % among the unemployed. Between the first and the last quartiles of income the proportion of subjectively downward mobiles drops from 37 to 14%. It rises from 15 to 40% as one moves from the lower to the higher quintile on our index of precariousness (score EPICES). Conversely, a clear majority (54%) of the respondents who see themselves as falling down the social ladder scale today are indeed trapped in a precarious life, economically insecure, deprived of basic goods and services (table 2).

A logistic regression analysis taking as dependent variable the feeling of being downwardly mobile and as predictors age, gender, occupation, employment status (self employed/salaried in private sector/public sector), monthly income, assets and score of precariousness (index EPICES) summarizes these relations and checks for the respective impact of each variable, all things being equal. All these variables have a statistically significant impact on perceived downward mobility, except gender and employment status. It's the degree of precariousness which has the strongest impact.

3. SUBJECTIVE MOBILITY, PRECARIOUSNESS AND VOTES IN 2012

To what extent does subjective mobility, and more specifically the feeling of going downward, matter at the moment of deciding for whom to vote in the presidential elections? If one looks at the votes in the first round it does not make much difference. One just sees a slight effect in favour of more radical candidates, Jean-Luc Mélenchon on the left, co-president of the Parti de Gauche and Marine Le Pen on the right, president of the Front national. The votes for the former rise from 10 to 14% as one moves from the upwardly to the downwardly mobile why the votes for the far right go from 16 to 22 percent.

There again, subjective downward mobility only makes sense if one takes into account where the person comes from and what are her other characteristics likely to influence her vote. If one enters the usual suspects- class, religion, education, age and gender-in a series of logistic regressions, with as dependant variable votes for the candidates of the left, the right and the far right, introducing our three point subjective mobility variable adds no statistically significant effect. It's only in interaction with class variables that this subjective feeling of social descent has an electoral impact and essentially among blue collars and routine non-manual employees. The level of support for Marine Le Pen in the first round rises from 25% among workers with a feeling of upward mobility to 32% among the stable and the downwardly mobile. While among employees it rises from 20% among the upwardly mobile to 28% among the downwardly mobile. These are the two occupational group were support for the far right reached its highest level in 2012, manual workers, mainly men on the one side, unskilled service proletariat employees on the other side, mainly women. Among them subjective mobility, comparing their position to their family's, and having a feeling of social descent, clearly makes a difference, increasing the probability to support the far right (Mayer, 2013).

One can also look beyond the vote, and construct an indicator of proximity with the far right, including five items, sympathy for the National Front, choosing the FN as the party one feels closest to, sympathy for Marine le Pen, wishing her to be elected, voting for her in the first round. On this indicator, subjective mobility has a significant impact. The probability that upwardly mobile support the FN and its president, all things being equal, are three times more important than for the downwardly mobiles. There is an electoral potential for Marine Le Pen, fuelled by the frustration and resentment associated to a loss of status, even if these sympathizers did not actually vote for her in 2012. This confirms other findings correlating downward mobility and support for the FN (Peugny, 2006).

This also stands out of the qualitative part of our research, on precarious populations of Paris, Bordeaux and Grenoble. On the precariousness index we used, the average score in our sample is around 60 and the majority are way below the poverty threshold. They only make it every month because of the help of the associations through which we met them. They are like a magnifying glass of downward social trajectories in France today.

These trajectories boil down to two main types. The first group has always faced hard times, since childhood, with added handicaps: poverty, mistreatment, split families, physical or mental disability. They left school before 14, went to youth rehabilitation centres, sometimes to prison, had various addictions. They have always been at the bottom, and at the margins of society, they have developed strategies to cope, to get by. It's the case for instance of Antoine (Man, 78 years old, retired, Paris). Born in a family of poor farm labourers in Britain, he lost his mother when he was one year old, was beaten by his stepmother, worked in farms since he was fourteen, was sentenced to three months of prison at 25 for attacking a policeman. Just when he had found a job again, he discovered he had a serious chronic disease (presumably AIDS) and just dropped everything, becoming a homeless, until he was picked up by a charity organisation.

The second group is more representative of downward social mobility in a period of recession. Part of our sample has known a better life. Around a quarter have studied at least up to the baccalaureate, sometimes beyond. As they say themselves, they used to lead a "normal" life before. They had a spouse, children, a house, a job, good wages. It's a string of circumstances that brought their "fall": a separation, an accident or a severe illness, losing their job, starting to drink, stopping relations with family and children, and eventually ending in the street. Adapting to this new situation is far more difficult for them than for the first group. A good example is the case of Eric. He is dressed like an executive, with care (blazer, scarf), his little glasses give him the look of an intellectual. He is educated, he went to university, he had a job as a French teacher for adults, he expresses himself clearly. This is his story:

> A women leaves you, and you drown … Socially I mean. I was the most normal guy in the world. I was a teacher. Not in the public service, I worked for the local council of … I taught French as a foreign language, I taught French to foreigners (…). Actually they spoke better than the majority of the French people but they did not know how to write in French, French is a difficult language to write. (Man, 60 years, unemployed, Paris)

When his wife left, he let himself go, his friends, his children got tired of helping him out, he was very ill and finally ended in the street until he was directed to a voluntary association that rescued him, the Petits Frères des Pauvres. He feels he has nothing in common with the other people who come like him to this day shelter to have breakfast, get a shower, read the papers.

Precariousness on the whole encourages political apathy, makes it more difficult to register in order to vote, more difficult to get information. Yet this population has not cut all links with politics, most of them recognized the presidential candidates on the photographs they were shown, and they had their word to say about politics. Their political orientations are very diverse, reflecting their prior life, their initial socialization. Those who were politically engaged before keep attached to their previous choices. On the whole our sample leans more towards the left, and expresses a strong anti-Sarkozy feeling, Sarkozy being seen as "the president of the rich". But there was also a marked feeling of sympathy for Marine Le Pen, recognized first by all on the photographs of the candidates. A few, like Eric, condemned her ideas vehemently. A few on the contrary were totally behind her like Antoine and said they voted for her because there were too many immigrants in France. But for most of them, even those saying they would never vote for her, even for children of immigrants, she had the image of somebody brave, courageous, outspoken, less racist than her father. The comments by Nadia, a women with three children, who arrived from Algeria in France 12 years ago, who always had a job and now is unemployed, are symptomatic:

> I'm going to surprise you a little, Marine Le Pen, I think she is reasonable . She is logical, a little (…). She has some ideas. For most people, she is the extreme. I don't think she is the extreme. I am not racist, I am a foreigner. But one must say things as they are. At least, she is outspoken, she is correct, one knows what to expect. That's it, frankly, that's it, with all that I would not vote for her, but maybe I trust her more than the other (candidates) at least I know what she wants, its clear cut, when she says I don't like or I like.

4. CONCLUSION

This is an exploratory work, a first analysis of the wealth of data collected for the Poor People Vote project. A next step would be recoding father's occupation to have a measure of objective mobility comparable to the one used in most surveys, and systematically compare objective and subjective social position and mobility. Yet these first results show the interest of using subjective indicators, the extent of precariousness in today France, and the complexity of the effects of subjective mobility on politics.

NOTES

1. The number of unemployed as defined by ILO (International Labour Office) in March 2013 was according to the Census Bureau (INSEE: Institut National de la Statistique et des Études Économiques) 3. 224. 600, amounting to 10.2% of the labour force.
2. Poll conducted by CSA (Conseil Sondage Analyses) for UNIOPSS (Union Nationale Interfédérale des Œuvres et Organismes Privés Non Lucratifs Sanitaires et Sociaux) and MACIF (Mutuelle Assurance des Commerçants et Industriels de France et des Cadres et des Salariés de l'Industrie et du Commerce) via Internet, 18–20 December 2012, on a national sample of 990 people, representative of the French adult population (quota sampling).
3. For a good discussion of the Goldthorpe class scheme that one can apply to the French classification by INSEE see the pioneer book by Daniel Oesch on *Redrawing the Class Map* (2006).
4. See http://www.cee.sciences-po.fr/en/research/to-grasp-the-policypolitics-articulation/votpauvr.html.
5. See http://cee.sciences-po.fr/fr/elections-2012.html.

6. Open question asked since 1966. In 2010 asked if they have the feeling they belong to a social class and if so which one? 64% of the national sample representative of French adult population say yes and among these 38% choose "middle class(ses)" versus 6% "working class" (Michelat, Simon, 2011: 139). In 1966 it was the other way round: of the 61% giving a class belonging, 23% chose working class, 13% middle classes.

REFERENCES

Attias Donfut, C. & Wolff, F.-C. (2001) "La dimension *subjective* de la mobilité sociale". *Population*, 56(6): 919–958.

Baudelot, C. & Establet R. (2000) *Avoir trente ans en 1968 et 1998.* Paris: Seuil.

Castel R. (2003) *L'insécurité sociale. Qu'est-ce qu'être protégé ?* Paris: Seuil/La République des Idées.

—— (1995) *Les métamorphoses de la question sociale*: *une chronique du salariat.* Paris, Fayard.

Cautrès, B. (1995) "Mobilité sociale et comportement électoral: modèles sociologiques et modélisations statistiques". *Revue Française de Sociologie*, 36(1): 185–223.

Chauvel, L. (1998) *Le Destin des générations. Structure sociale et cohortes en France au XXe siècle.* Paris: PUF.

Cherkaoui, M.(1995) "Mobilité sociale et comportement électoral: taxinomie de modèles de relation". *Revue Française de Sociologie*, 36(1):171–182.

Duru-Bellat, M.& Kieffer, A. (2008) "Objective/subjective: The two facets of social mobility". *Sociologie du travail*: e1-e18 (Available online 10 September 2008 on ScienceDirect doi:10.1016/j.soctra.2008.07.001).

Goos, M., Manning, A. (2007) "Lousy and lovely jobs: The rising polarization of work in Britain". Open Access publications from Katholieke Universiteit Leuven urn:hdl:123456789/101308, Katholieke Universiteit Leuven http://ideas.repec.org/a/tpr/restat/v89y2007i1p118-133.html (last access 13 May 2013).

Labbé, E., Moulin, J.-J., Guéguen, R., Sass, C., Chatain, C., Gerbaud, L. (2007) "Un indicateur de mesure de la précarité et de la 'santé sociale': le score EPICES. L'expérience des Centres d'examens de santé de l'Assurance maladie". *Revue de l'IRES*, 53(1).

Lazarsfeld, P., Jahoda, M., Zeisel H. (1982) *Les chômeurs de Marienthal.* Paris: Minuit (1st edn. 1932)

Mayer, N. (2013) "From Jean-Marie to Marine Le Pen: Electoral change on the far right", *Parliamentary Affairs*, 66: 160–178.

Michelat, G. & Simon, M. (2011) Inquiétudes, dynamiques idéologiques, attitudes: quoi de neuf? in TNS Sofres, *L'Etat de l'opinion.* Paris: Seuil, pp. 137–164

Peugny, C.(2013) *Le destin au berceau: inégalités et reproduction sociale.* Paris: Seuil.

—— (2006) "La mobilité sociale descendante et ses conséquences politiques; recomposition de l'univers des valeurs et préférences partisanes". *Revue Française de Sociologie*, 7(3): 443–478.

—— (2009) *Le déclassement.* Paris: Grasset.

Piven F.F. & Cloward, R.A. (1998) *Poor People's Movements: Why They Succeed, How They Fail*. New York: Vintage.

Vallet, L.-A. (1999) "Quarante années de mobilité sociale en France. L'évolution de la fluidité sociale à la lumière de modèles récents", *Revue Française de Sociologie*, 40(1): 5–64.

PART FIVE

Status Distributions

23

INVISIBLE COMMUNITY AND PEERLESS SCIENCE[1]

Case Studies from Morocco and India

Michel Dubois
CNRS, GEMASS, Paris

Mohamed Cherkaoui's recent book—*Crise de l'université* (2011) [CU]—is a contribution to the sociology of science in the Arab world. Synthesis of several empirical and bibliometrical studies conducted between 2005 and 2009 in Morocco, the book addresses one key question (among many others): how do scientific communities emerge as a legitimate social reality? Under what conditions? On the basis of which social mechanisms? Formulated as such, this question is of course as old as the sociology of science itself. It has already received a wide variety of answers, not only from sociologists but also from historians and philosophers, without mentioning those scientists who are keen to write their own history.

Keeping this global inheritance in mind, CU's originality can be briefly described as twofold. (1) First, the novelty and the richness of its empirical material. Like other Maghreb countries (Algeria or Tunisia), Morocco has an institutional and intellectual model that draws its inspiration from Europe, and more specifically from France. This model, and its importation (in the context of political independence in the late 1950s) has been discussed from a historical perspective (Kleiche-Dray, 2009). Scientometric studies have investigated the Moroccan scientists' productivity in basic and engineering sciences (Rossi, Waast, 2008; Bouabid, Martin, 2009) and, for the same domains, the impact of government policy such as the Voluntary Early retirement launched in 2005 (Bouabid *et al.*, 2011). In contrast with these studies, and most others available,[2] CU's main focus is on the situation of the Social and Human Sciences (SHS). Given the well known difficulty of having reliable databases for SHS, and more accurately for this specific geographical area, the interest of a research programme built on a dedicated bibliometrical database (approximately 60 000 publications) and a large scale survey (quantitative/qualitative) is easily understandable. (2) The second main originality of CU as a contribution to science studies, is its theoretical orientation. Whereas science studies were originally developed as microanalysis of science (laboratory studies or controversy studies), it is nowadays generally acknowledged that sociologists should not only adopt wider approaches but also refuse to content themselves with purely descriptive approaches of scientific practices. CU's large-scale analysis of SHS community in Morocco is grounded in what I have proposed (Dubois, 2012) to call an "actionist" conception of sociological explanation—following Raymond Boudon's general orientation. In my view, CU shows the importance of not restricting ourselves to a too narrow empirical approach of "science as action". To describe any given dimension of scientific action is one thing, to use the concept of action to explain sociologically any given social dimension of contemporary science is quite another. The research strategy adopted by Cherkaoui to account for the collective properties of academic life in Morocco demonstrates the importance of keeping this distinction in mind.

In the first section of this article, I will briefly discuss some of the main results and arguments proposed by Cherkaoui. CU is a vigorous call for the emergence of an autonomous SHS community freed (at least partially) from local demands (generally defined by the State). Interpreting the current invisibility of such community as the consequence of the nonexistence of "peers" as a reference group, and peer review (PR) as a source of social differentiation, CU emphasises the central nature of PR as a social mechanism in science (PRM). The second section focuses on this mechanism. It aims to sum up the teachings from the main sociological studies concerned with its origins, modes of functioning, intended and sometimes unintended outcomes. We distinguish between two categories of sociological studies: (1) those focused on PRM as an evaluation device used by scientific publications, (2) those focused on PRM as an evaluation device used by funding agencies. The last part of this second section highlights the main arguments of the PRM controversy. Finally, the third section invites the reader on a sociological journey from Maghreb to South Asia, with a case study on Indian scientists' attitudes toward PRM. Cherkaoui considers that most of his conclusions "apply to many academic systems in developing countries (…)" (CU: 109). Beyond their numerous differences in terms of scale, culture, etc. India shares with Maghreb countries a colonial past and a struggle to establish not only political independence, but also a national scientific tradition partly built upon Western standards (France for Morocco, United Kingdom for India). A corpus of approximately 200 letters, opinions and commentaries extracted from the columns of the interdisciplinary journal *Current Science* will give us an opportunity to assess the diversity of attitudes of Indian scientists towards the PR mechanism.

1. THE TWO MARKETS OF SOCIAL AND HUMAN SCIENCES IN MOROCCO

The *Crise de l'université* [CU] is rich enough to offer multiple readings. In this first section, we choose to focus on two of them. Firstly, CU can be read as an exercise in the sociology of occupational structure. Moroccan SHS scholars occupy various positions within this structure. What research strategy should we adopt to explain the morphology of occupational structure of SHS? The originality of Cherkaoui's study in the general area of science studies is to adopt an actionist approach. Secondly, CU can be read as a survey of the general perceptions of academic life forged by scholars themselves. Reversing the traditional perspective of the public understanding of science (PUS), Cherkaoui investigates the academic understanding of universities. CU can be read as a quasi "police investigation" intended to solve an enigma that emerges from the study of these academic representations: why is there a strong majority of scholars (60% of respondents) who do believe that there is currently no real SHS scientific community in Morocco?

1.1. Action and stratification in science

How should we study science sociologically? Since the birth of the speciality, numerous answers have been proposed. Textbooks and handbooks enumerate the successive, and sometimes coexisting theoretical approaches produced by the sociological imagination. This imagination is however sometimes paradoxical, at least in regard to the use of the concept of "action". This concept can be described as being both central and to a large extent under-utilised. Central because the speciality is frequently described as a hyper-empirical approach to the ordinary and everyday actions of scientists. The sociologist's job consist smainly of "following the scientists" … the old slogan of constructivist studies helped undeniably to unify a community dedicated to the production of knowledge about scientific practices. But the concept of action is also sociologically under-utilised, because too many sociologists limit themselves to a descriptive programme and by doing so do not perceive its explanatory potentiality. The situation is really even more paradoxical, as Merton, who contributed most to the institutional establishment of the sociology of science as a speciality,[3] also contributed most to defining the explanatory potential of the concept of "action" in his early writings on "the unanticipated consequences of purposive social action" and the "self-fulfilling prophecy".

To sum up briefly our general orientation (Dubois, 2012), we consider that in order to give a real centrality to the concept of action, one must adopt a research strategy that involves considering the collective properties of science as the intended or unintended outcomes of the actions taken by scientists. What could be these collective properties? Let's consider a discipline as a unit of sociological analysis. This unit may vary greatly in size: it may include a very small or a very large number of people. A discipline can also be divided into many sub-groups (into specialities or subspecialities) or on the contrary can retain a strong unity or homogeneity. A discipline may also have very diverse forms of work organisation or disorganisation. The question of anomie within science is regularly discussed. A discipline may be also characterised in terms of relational structures—networks and information collaboration, citation and co-citation networks, etc. These properties of size, cohesion, organisation, stratification, relationality, etc. do not concern any particular individual. They correspond however to a collective dimension that can be explained from the study of individual actions. The parameters of action (the various factors taken into account by individuals to define the course of their action) can be multiple, individual and structural. Yet it remains the case that it is from the accumulation of these actions that a collective property might be produced, which the sociologist needs to explain.

An undeniable strength of CU's approach is to apply this general strategy to the occupational structure of higher education in Morocco. Cherkaoui starts by defining the macrosociological distribution of the population studied (1600 individuals, 45% of the total population). The majority of this population is located in four cities: Rabat (22.5% of the sample), Casablanca (15.5%), Fès (13%) and Marrakech (10.6%). 54% of the sample studied is affiliated to faculties of humanities ("facultés des lettres"), 32% to faculties of law ("facultés de droit"), and 14% to other establishments (institutes, private universities). There is a strong relationship between socio-occupational origins and institutional affiliation. People coming from higher socio-occupational categories are more likely to teach Law and Economics (43%) than Literature or Human sciences (36.7%). Whereas people coming from lower socio-occupational categories (employee, worker) work predominantly (66.7%) in faculties of Humanities. The third type of distribution analysed by Cherkaoui is that of individuals between the different occupational grades. 52% of the sample studied are professors, 12% associate professors (maître de conférence), 32% assistant professors (maître assistant) and 4% assistants. The general form of this occupational structure is manifestly unbalanced: "(…) soon", writes Cherkaoui, "law and humanities universities will be comparable to the Mexican army, composed essentially of generals. The figures are eloquent in this regard and alarming. At first, the percentage of assistants and assistant professors was 94% against 6% for associated professors and professors. Nowadays the percentage of assistants and assistant professors has been divided by three (…)" (CU: 43).

These macrosociological distributions (geographical, institutional and occupational) are some of the collective properties of academic life in Morocco described in CU. How can we explain them? The explanation of the geographical agglomeration seems the easiest one. The universities of Rabat and Casablanca are ancient (the oldest ones of the country) and benefit from their location in areas of high density of population. The axis Casablanca–Rabat alone contributes to 35% of the national wealth. Almost all the resources available for the private sector and the tertiary sector are in this area. An area which, therefore, attracts a significant portion of the population of peasants leaving the countryside for urban environment. But as for the institutional and occupational distribution, the explanation seems less obvious. Cherkaoui's general hypothesis is that the public authorities contribute, through their general policy, to transform the opportunity structure which constitutes a component of the individual's strategic reasoning. The shape of the occupational structure becomes the outcome of the interplay of at least three dimensions, situated at distinct analytical levels: a) the specific norms and rules of academic occupation, b) the global government's policy of trying to reduce the weight of the bureaucracy, c) the strategies of students and scholars searching to limit their feelings of deprivation.

Cherkaoui's diagnosis is harsh. If the University is probably "the most meritocratic institution in Morocco" (CU: 42), occupational mobility remains mainly based on bureaucratic criteria. Hence the strong relationship between mobility and age. The considerable weight of the professors and associate professors in the occupational structure is the direct consequence of the ageing of the population, independently of its creativity or its productivity. Political decisions are sometimes ill-prepared. In the context of the early retirement policy launched in 2005 and the importation of the European model of bachelor's degree–masters–doctorate (BMD), the decision to save public money by replacing permanent teachers with poorly trained and poorly paid contractors (*vacataires*) has had some lasting consequences. It certainly allows the State to make significant budget savings, but it also contributes to weaken the quality of education in SHS, the link between teaching and research and more globally the attractiveness of academic careers for young people. Students are more and more reluctant to consider the possibility of an academic career, but they are not all equal in this matter. Students in law or economics, coming in the majority from higher socio-occupational categories, are more likely than others to pay the costs for the reorientation of their professional plans on a national or international level: “Developing countries suffer more from this situation (…) In a context of globalisation, they are not able to compete with the rich countries. Morocco is no exception” (CU: 56). This leads us back to our initial observation about the influence of social factors on the disciplinary distribution of the population. Cherkaoui claims that the sociologist does not have here to presuppose any form of unconscious reproduction mechanism. It is sufficient to notice that individuals generally evaluate the costs, risks and expected benefits of their educational and occupational choice. In this matter, whereas students of low socio-occupational categories tend to minimise the risks and costs by choosing an undergraduate education in humanities (with a relative certainty of becoming at least teachers in the secondary cycle), students of high socio-occupational categories more readily accept the costs and risks associated with a postgraduate education in law or economics. They are also generally better informed about the possibilities of promotion toward the higher level of the Administration or the private sector.

1.2. The invisible scientific community

This exposure of Morocco to the brain drain emphasises the local lack of social prestige of the scientist’s role in SHS. The development of this role supposes certain preconditions. Following a Weberian approach, sociologists have repeatedly studied the axiological basis of science (Merton, 1938; Ben David, 1971). For science to become an institution, it is not enough to produce new forms of knowledge. Science has to be more than just congruent with the surrounding social values, it has to be collectively acknowledged as a value in itself. It is through the production of its own social value that science acquires its recognition as an autonomous realm. The “knowledge for its own sake” is a common formula to evoke this realm. In this matter the contrast between the developed countries and the developing or emerging countries is well documented (Gaillard *et al.*, 1997; Shinn *et al.*, 2010). In particular the fact that much of the science and technology in the latter came as part of European colonial expansion has led to the production of their local legitimacy becoming more complicated in comparison with other modes of production of knowledge (such as traditional ones). Even though the scientist's role is nowadays frequently subject to ambivalent interpretations in the developed countries,[4] its prestige remains generally much higher than in the developing or emerging countries.

CU's objective is not to propose another survey dedicated to the public image of SHS in Morocco or to describe its public understanding. CU focuses on the self-image of the population studied: how professors think about themselves as individuals but also as a collectivity. Citing the famous Thomas theorem—"If men define situations as real, they are real in their consequences"—, Cherkaoui underlines the importance of this subjective dimension. Representations are like definitions of situations that orientate the course of the individual's actions. We will look at only three types of perceptions among those detailed in CU.

These representations may be related to prestige. When asked to evaluate their own occupation on a scale of prestige from 1 (the less prestigious) to 5 (the most prestigious), the respondents converge to locate the university professor at the bottom of the occupational scale, just before lawyers and journalists. With the exception of physicians, the most prestigious occupations are generally associated with public administration (governor, colonel, police officer, etc.). These representations may be related to their degree of occupational satisfaction. When asked to evaluate their degree of satisfaction, a very strong majority of respondents (72.5%) declare being unsatisfied. Considered as a whole, the population studied expresses an undeniable negative perception of the consequences of political decisions for their academic life. Cherkaoui observes here an interesting paradox: the respondents having the highest occupational grade, those who benefited the most from occupational mobility, are also those who have the most negative opinion about their own situation. If the assistants are equally distributed between the positive and negative opinions, professors are six times more likely to be unsatisfied than satisfied. This paradox is an interesting case study for relative deprivation theory: the higher your expectation gets, the higher you might feel the discrepancy between expectation and reality.

These representations may also be related, and this is the point we want to focus on here, to the existence of SHS scholars as a community. How do professors think about their belonging to a community having its own norms, its own social regulation? As repeatedly demonstrated by sociology of science, being a scientist is never just an issue of confronting oneself with reality using the methods and tools of abstraction and experimental rationality—the famous "logic of scientific discovery" defined by Popper. It is also, after a long process of socialisation, being a member of a socially differentiated collective with specific norms and values.[5] CU's key questioning is precisely about the subjective perception of the existence of this community. Does the population studied consider itself as an autonomous scientific collectivity able to define its own objectives, its own norms of evaluation and social rewarding? The answer is clear: for a large majority of the respondents (approximately 60%), the professors, associate professors, assistant professors, and assistants working in the Moroccan Universities of Law and Humanities do not constitute a distinctive scientific community. For Cherkaoui, this belief constitutes a strong definition of situation. If the respondents believe that they are not members of a scientific community, then they should act according to this belief. And these actions, added to others anchored in the same definition of situation, may have major and visible consequences. If a scholar does not consider himself as a member of a distinct community, then his or her publications (papers, books) will be directed toward another audience, more heterogeneous in its composition and its criteria of value. And this, from a collective perspective, should be demonstrable with bibliometrical data.

Using a Boudonian approach (Boudon, 1981), Cherkaoui distinguishes mainly between two kinds of audiences, each considered as a different market. The first homogeneous market is composed exclusively of scholars and peers. This is the "regular" market for scientists: papers submitted to scientific journals are intended to be read and discussed by peers. And it is through this reading and this critical discussion that scientists generally gain their social, symbolic (scientific prize, honorific award) or material (promotion or mobility) recognition. The second—"secular"—market is much more heterogeneous. It is composed of all persons potentially interested in the topics addressed by social and human sciences: peers of course, but also students, policy makers, journalists, general public, etc. In this extended market, the audience is much wider than in the regular market. The possibilities of social recognition are multiplied. But the criteria used to assess the importance of an individual's contribution are more scientifically uncertain.

CU's bibliometrical analysis is based on a corpus of approximately 60 000 papers or books published in SHS journals or by publishers in Morocco. The important point here is that the corpus mixes two kind of publications: those produced by authors with academic status—professors, associate professors, etc.—and those produced by authors having no academic status. Cherkaoui proposes thus an innovative comparative analysis of the modes of intellectual production. The research question is simple: is it possible to assume that academics and non-academics have different modes of intellectual production? The hypothesis, tested by Cherkaoui, is that SHS academics, assuming in majority the non-existence of the first market (at least at a national level), do not have a specific mode of intellectual production that clearly separate them from non-academics. Just like them, they produce their papers and books with one single market in mind—the secular one. The bibliometrical analysis tends to support this hypothesis. Academics and non-academics have globally the same productivity (relatively low[6]) and their publications appear in the same journals or in the same publishing houses. Academics and non-academics have the same general areas of interest: literature, law, sociology, history, Islamic studies, policy studies, economics. The latter tend to be slightly more productive in literature and Islamic studies, whereas the former tend to favour sociology, history and policy studies. More decisively, the quantitative analysis of the general dynamics of publications shows no real difference between the two categories of authors. The same modelling—the power law model—fits with the data of the distribution productivity's of both academics and non-academics between 1960 and 2003. Added to numerous other similarities detailed in CU, these general characteristics of the corpus studied tend to confirm the robustness of Cherkaoui's hypothesis about the secularisation of intellectual production. Observing no difference in nature between the intellectual production of academics and non-academics, it becomes possible to consider that "the same market mechanisms govern the production of the two groups. If the publications of the academics do not differ much from those of non-academics, this is because both types of production are aimed at the same market (…) unlike scientific production in the United States of America and Europe, which is intended primarily for scientific communities. The number of academics in the human sciences who are primarily concerned with the requirements of the scientific community is so small[7] that it has no influence on the overall result" (CU: 157).

If the analysis of the properties of the corpus of publications confirms indirectly the magnitude of the consequences of the individuals's belief about the non-existence of the scientific community as a reference group, are there any "good reasons" to believe so? Cherkaoui identifies three main reasons.

(1) First the role of state policy. Public authorities do not have a strong policy able to support, financially and administratively, the institutionalisation of a strong and visible scientific community in SHS. Facing the lack of recruitment at university level, professors are mainly absorbed by their teaching duties and they have no more time for research. The quasi absence of basic research is not just a question of time, it is also a question of funding. The State concentrates most of its funding on calls for proposals aimed at producing expertise or to solve local problems. This social engineering is of course necessary, particularly for developing countries where the needs are numerous, but the State, claims Cherkaoui, should contribute to the funding of basic research, free from any practical application. Only this diversity of funding will guarantee not only a minimal form of autonomy for scientific research but also, by extension, a sense of belonging for individuals working on the same area of research.

(2) Second, the influence of political and social movements inside universities. Because of their obvious socio-political implications, the social and human sciences regularly face the risk of political instrumentalisation. In its most radical forms, the secularisation of academic life may endanger the principles of academic freedom and axiological neutrality. Public authorities are particularly attentive to this risk and sometimes try to control it directly or indirectly. The "white revolution" of Islamist students in numerous Arab-Muslim societies is closely scrutinised by public authorities.

(3) Third and finally, the absence of a legitimate peer review mechanism. Cherkaoui sums up the traditional culture of evaluation in Morocco: “There is no legitimate national authority controlled by peers to assess the work and control promotion. The faculty boards are not perceived as independent, reliable, or objective. Promotion is done on the basis of bureaucratic rules that clash with the standards of any university worthy of the name for which scientific productivity and fair competition are two main evaluation criteria (…)” (CU: 115). Most of the population studied manifests a feeling of distrust about the peer review mechanism. Asked whether they prefer to be evaluated by local administrative authorities, central administrative authorities or peers, 64% choose local evaluation, 23% central evaluation and only 13% peer evaluation. In this matter, observes Cherkaoui, Moroccan academics “remain prisoners of what they consider as reality” (CU: 103). Believing firmly in the non-existence of their collective as a community, they act accordingly to this belief and thus continue to hinder its possible emergence.

2. PEER REVIEW AS A SOCIAL MECHANISM

Cherkaoui’s study clearly shows that part of the problems of SHS in Morocco comes from the difficulty local academics have in considering themselves not only as a closed market (the “regular” market), but also as a community of peers able to exert an autonomous form of social control. The secularisation of the intellectual production of Moroccan scholars is directly related to the fact that they act as if they were “peerless” scientists.

Before following Cherkaoui’s example through a case study devoted to scientists’ representations of the peer review mechanism (PRM) in India, this section briefly reviews the main sociological studies devoted specifically to this mechanism. In contrast with the situation in Morocco, PRM is frequently considered by Western scientists as the basis of the reward system in science and consequently of its social stratification (Cole & Cole, 1973). However this does not imply that scientists this PRM is a perfect device. A typical sentence heard about it, in many scientific occasions (colloquium, congress, etc.), is that “Peer Review may be flawed, but is the best we’ve got …”

The first two parts of this second section describe the main results of the sociological studies devoted to the practice of PRM for scientific journals and allocation of research funds. The third part deals with the "possible flaws" of PRM. Is PRM really "the best we've got"? We discuss the arguments generally used in the PRM controversy.

2.1. PRM research programme (I): Scientific Publications

The development of PRM originated with the founding, by the end of the seventeenth century of the first scientific academies (the Royal Society in London, the Académie des Sciences in Paris) and their respective periodicals (*The Philosophical Transactions*, *Le Journal des Sçavans*).

In their analysis of the institutionalised patterns of evaluation in science, Merton and Zuckerman (1973) recall that PRM did not appear all at once. It emerged progressively as a by-product of the development of the social organisation of science. PRM is an "organisational machinery" used initially by the scientific societies and their periodicals to distinguish themselves from other forms of intellectual interchange. It is a collective certification device absent from the previous modes of diffusion of scientific knowledge. The terms of the authorization granted in 1664 for the publication of the *Philosophical Transactions* are as follow: "(…) Ordered that the *Philosophical Transactions*, to be composed by Mr. [Henry] Oldenburg [one of the two Secretaries of the Society], be printed the first Monday of every month, if he have sufficient matter for it; and that the tract be licensed under the charter by the Council of the Society, being first reviewed by some of the members of the same" (cited by Merton, Zuckerman, 1973: 463). The exact formulation of this decision is sufficient to show that the Council of the Royal Society, far from worrying only about the availability of scientific content, had from the beginning a desire to review and certificate such content; a control that helped to reinforce the emerging legitimacy of the Royal Society itself. More globally, Merton and Zuckerman see PRM as an organisational response to three distinctive concerns situated at different levels. Concerns, first, from the scientists considered as producers of science. The scientists wish to have their work recognised through publication in forms valued by other members of the scientific community. Concerns also come from scientists considered as consumers of science. In order to build new knowledge from the work previously produced by others, scientists have to be confident about its authenticity and its validity. Concerns finally from the Royal Society itself: the authoritative status of this emerging social organisation stems from its ability to produce reliable and competent assessments.

Since the late seventeenth century, PRM has been widely used in the great majority of scientific journals. Scientists generally consider that the most prestigious journals are also those which adopt the most reliable and demanding PRM. The peers act as "gatekeepers": their judgements have considerable influence over the final decisions of journal editors on whether or not to publish a manuscript. PRM has one overriding goal: to advise on whether a manuscript meets the accepted standards of the scientific community for it to be considered as a form of public knowledge through its publication in scientific journals. But the requirements are numerous. As recalled by La Folette (1992), Peers are supposed "(…) to address the technical accuracy of details or statistics, to judge whether the work submitted appears on the whole to be correct, to assess whether the conclusions fit the data presented (…) to assess the manuscript's readiness for publication (…) to advise [the editor] on the importance and relevance of its results (…) if the author's name is revealed … to compare the article to the author's other works" (p. 123).

Beyond this list of theoretical requirements, sociologists analyse the practical side of this mechanism and its consequences. In their pioneering study, Merton and Zuckerman observe for example that the same mechanism may have different consequences according to the discipline observed. The study of the mean rejection rates in a sample of 83 journals in sciences and humanities shows a clear distinction between journals in social and human sciences (such as history, philosophy or sociology) and journals in biology, physics, geology or linguistics. Whereas the first group of journals reject on average approximately 80% of the papers submitted, the second group reject only approximately 25% of the submitted papers. This difference is interpreted by Merton and Zuckerman as the possible outcome of the variation of the degree of formalisation of disciplines and the variation of consensus between scientific fields and within scientific fields. Studying the archives of the prestigious *Physical Review*, Merton and Zuckerman assess the degree of universalism of PRM through the disentanglement of the components of evaluation. Their sociological research question is built on Merton's (1968) previous work on the Matthew Effect: Is it possible to consider that the social status of both author and referee significantly affects the judgement of manuscripts? Is PRM really free of any preferential bias so that work of the same intrinsic worth will be evaluated in the same way? Although the study concludes that for this journal, at least, the relative status of referee and author has no perceptible influence on patterns of evaluation, it also describes some of the forms of potential bias that exist alongside PRM: "The higher the rank of authors in the prestige hierarchy, the greater the proportion of their papers which are judged by the two editors—either singly or in tandem without going to outside referees. Of the manuscripts submitted by the physicists of the highest rank, 87 percent were judged exclusively by the editors, in contrast to 73 percent of those coming from the intermediate rank and 58 percent of the rest" (p. 482).

This general approach oriented toward the evaluation of the degree of universalism of PRM has been progressively enriched. Studying the peer review for manuscripts submitted to the *American Sociological Review* between 1977 and 1981, Bakanic *et al.* (1987) observe no real influence of the personal characteristics of the authors and referees on the outcome process. The study shows however that manuscripts using qualitative data are more likely to receive negative recommendations from reviewers: "(…) the sole manuscript characteristic yielding a statistically significant effect was the use of qualitative data analysis. The relationship was negative. A self-fulfilling prophecy may be at work here. ASR has a reputation for publishing primarily quantitative research. Therefore, savvy qualitative sociologists may choose to submit their work elsewhere, believing (…) they cannot get an impartial review at ASR. The unfortunate result is that the qualitative work submitted to ASR does not represent the full range of this important form of work that should be reviewed for publication in a general sociological journal of wide circulation" (p. 638). Hargens (1988) and Cole *et al.* (1988) have both tried to assess the impact of the social and cognitive differences between disciplines on PRM. If the first, along the lines of Merton and Zuckerman, considers that the journal rejection rate is the best way to measure indirectly the differences of consensus between scientific disciplines—lower rejection rate in natural sciences journal supposes higher cognitive consensus—, Cole *et al.* (1988) consider that cognitive consensus remains one variable among many others. The fact that the space available in journals might differ from discipline to discipline should be taken into account: "one reason for the higher social-science rejection rate may be less space available in these disciplines" (p. 152). The norms of publication may also vary from discipline to discipline: "Some fields, such as physics, have a norm that submitted articles should be published unless they are wrong. They prefer to make 'Type I' errors of accepting unimportant work rather than 'Type II' errors of rejecting potentially important work. This policy often leads to the publication of trivial articles with little or no theoretical significance, a reason frequently cited by referees in social science fields in rejecting articles" (p. 153). A third variable that could also interfere with the degree of cognitive consensus is the diffuseness of a field's journal system: "In physics, the two leading journals publish more than 50 percent of all literature in the field; in sociology, the two leading journals publish only a small fraction of all literature. This means that sociologists must submit their articles to one journal after another until the article is published or the author gives up" (ibid).

2.2. PRM research programme (II): funds and grants

Beside journals and publications, thePRM research programme in sociology of science generally devotes specific attention to the process of allocation of funds and grants. The evaluation of proposals for future research generally differ from the evaluation of manuscripts by its higher degree of uncertainty. Judging untested ideas in emerging research areas is different from judging the validity of a finished work. It involves having to assess the potential of a scientific orientation (theoretical, methodological, etc.) without having strong certainty about the conditions of its implementation and possible reorientation in the future. Peers evaluate both the potential value of proposed research projects and the ability of proposers to perform the studies. The study on *Peer Review in the National Science Foundation* by Cole *et al.* (1978) is one of the first studies dealing with the funding process inside governmental agencies. Produced under the auspices of the agency, its main objective is to determine how the PRM works in practice at the NSF. The study combines in-depth interview with programme managers and quantitative data about successful and unsuccessful grant proposals. As for the case of the *Physical Review*, Cole *et al.* could not find any strong evidence that the characteristics of reviewers interact with the characteristics of applicants sufficiently enough to determine the outcome of PRM. However they underline the importance of a precondition to PRM: the choice of reviewers by the programme manager. This choice supposes considerable scientific and administrative expertise and may have important consequences for the nature of the evaluation. A programme director may predetermine the outcome of PRM simply by choosing scientists according to their predictable evaluations. This predetermination of PRM is sometimes described by the "old boy hypothesis".[8] In a retrospective analysis of all research conducted on PRM at the NSF, Cole (1992) claims that all share the same conclusion "(…) the funding of a specific proposal submitted to the NSF is to a significant extent dependent on the applicant's 'luck' in the programme director's choice of reviewers" (p. 99). This choice of reviewers by the programme manager may sometimes be difficult. Specific attention has been given by Porter and Rossini (1985) to the evaluation of cross-disciplinary research proposals. These proposals, by definition, cross over the traditional boundaries of disciplines. Porter and Rossini conclude from their data (257 reviews of 38 projects from five different National Science Foundation programmes) that PRM at the NSF tends to automaticalle downgrade the interdisciplinary proposals that lack an established peer group or the proposals that partly go beyond the reviewer's own domain of expertise: "well-established research areas are thus favoured over nascent ones" (p. 37). This specific exposure of nascent areas of research to possible bias is also analysed by Travis and Collins (1991). Their study, based on the observation of 10 meetings of grant-awarding committees of the U.K. Science and Engineering Research Council (SERC), reinterpret the old boy hypothesis from a cognitive perspective: "the 'old boyism' discussed in previous studies of peer review (…) is not a matter of common institutions but rather of cognitive similarity" (p. 323). For Travis and Collins, the members of the panels build a part of their assessment from their own cognitive interest, thus leading to the possibility that original cross-disciplinary proposals suffer from a simple cognitive neglect.

The organisational and material implementation of PRM may also have an influence on the outcome of PRM. Langfeldt (2001) observed panel meetings organised by the Research Council of Norway (RCN) in 10 different scientific fields. He considers that although the general guidelines given to the panel meetings have little effect on the criteria used by panellists, other factors may influence the outcome of PRM. The size of the budgets available and the rating scale are important: "original and controversial projects seemed to have better chances with ample budgets and rough-rating scales. With a rough-rating scale for research quality, the panel ends up with several applications with identical marks, and with a good budget, the panel may fund more than a small number of 'obviously best' applications" (p. 836). But so are also the ranking methods. Not all panels have the same method. Some imply that all panel members get their favourite candidate funded. Others eliminate proposals to which a majority of the panel members do not give priority. Whereas the first method seems to guarantee a degree of pluralism (at least proportional to the plurality of the panellists), the second tends to concentrate the funds on uncontroversial and consensual proposals. The funding of innovative proposals is complicated by the fact that all panel members do not necessarily share the same conception of novelty or originality. In their study on *Originalities in Human Sciences*, Guetzkow *et al.* (2004)[9] show that panellists do not necessarily share the same criteria of originality. Although panellists from the natural sciences generally define originality as the production of new findings and new theories, panellists from the social and human sciences define originality much more broadly. Built on interviews conducted with panellists serving on funding panels at five fellowship competitions in SHS, the authors propose a typology of seven categories according to the aspect of the work respondents described as being original. They also produce the frequency distribution of these categories within a total of 217 mentions of "originality" studied. The first five are well-known categories: the research topic (15%), the theory used (19%), the method used (12%), the data on which it is based (13%), and the results of the research (4%). The last two categories are more rarely clearly identified. The category "new approach" (31%) refers to instances where panellists commented on the innovative character of the questions or arguments formulated. The category labelled "understudied area" (6%) refers to instances where panellists discussed work set in a neglected time period or geographical region. Interviews with panellists show also that these categories are frequently related to a judgment about the "moral" qualities (or lack thereof) of the applicants. This moral dimension of PRM appears mainly through the various adjectives used by panellists to qualify them: "Applicants' whose proposals were deemed original were often described (…) as adventurous, ambitious, bold, courageous, curious, independent, intellectually honest, and risk-taking. They were also viewed as 'going out of their way', 'challenging the status quo', 'thinking for themselves' and 'having a passion for ideas.' (…) Conversely, lack of originality indicates a scholar who is lazy, disingenuous, eager to please, which shows that s/he possesses no authentic intellectual passion or interests" (p. 203). This moral dimension of PRM should not be interpreted as a form of deviation from the traditional norm of universalism (Merton, 1938, 1973). In the continuity of this normative approach to science, it demonstrates the necessity to keep in mind the axiological dimension of any evaluation process in science.

To conclude this brief review of literature, it is useful for our general purpose to mention the few studies dedicated to the scientist's own representations of PRM. Gillespie *et al.* (1985) study how biomedical researchers perceive the evaluation process for research funding from NIH's National Cancer Institute (NCI). Do they consider that this process needs to be reformed or not? The population concerned here is a random sample of approximately 200 applicants. Respondents are asked to communicate about their experience with PRM through a scale of six items describing various forms of potential bias. If item 2 ("Reviewers Are Biased Against Young Researchers") and item 3 ("Reviewers Are Biased Against Women and Minorities") obtain relatively low scores, other items are much more popular among scientists. In decreasing order, 62% of respondents believe (strongly or not) that in general, NCI peer reviewers are reluctant to support proposals featuring unorthodox or high-risk approaches (item 6); 41 % of respondents believe that the hypothesis of the Old Boy Network is true (item 1); 35.4% of respondents believe that reviewers are biased against researchers located at non-major universities or institutions in certain regions of the US (item 4); 31% of respondents consider that ideas are routinely pirated from research proposals by reviewers (item 5). For Gillespie *et al.*, this study of the scientist's representations shows that funding agencies have to inform the applicants more systematically about their internal policy: "Several of the responses to items contained in it, such as the perception that 'old boy networks' control the Initial Review Groups (IRGs), imply that a large proportion of applicants for funding are uninformed about the operation of the NIH system. Strict rules have been in force for years, severely restricting the service of any individual on IRGs and requiring that various categories of scientists be represented (…)" (p. 51). On a larger scale, McCullough (1989) analyses the survey conducted by the National Science Foundation on a population of 9 500 principal investigators (PIs) whose proposals were awarded or declined during one year. This general population is divided into six categories of applicants according to their experience with NSF in five years prior to survey: one-time awardee, frequent awardee, consistent awardee, one-time declinee, frequent declinee, consistent declinee. Compared to the average applicant, consistent awardee is more likely to be male, older and affiliated to the top 20 institutions regularly funded by NSF. As expected these applicants tend to see PRM with a higher degree of satisfaction (83% of them are satisfied, 5% neutral and 12% dissatisfied) than the consistent declinees (57% of them are dissatisfied, 16% neutral and 27% satisfied). All dissatisfied respondents were asked about the reasons for their negative representation of PRM. The study provides a list of 14 items ordered by decreasing frequency: Reviewers or panellists not expert in the field, poorly chosen, or poorly qualified; Reviews were perfunctory, cursory, nonsubstantive; Reviews were conflicting; Cronyism, politics, "old boys' network"; Decision was unclear or inconsistent with reviews; Reviews contained remarks considered biased, personal, or intemperate; Process is simply "unfair"; Process is too slow; System biased against "innovative" proposals; System biased against particular research topics; Programme officer unqualified or inexperienced; System biased toward "big schools"; System biased against interdisciplinary proposals; Proposal handled by wrong programme. This list of items shows some of the organisational problems related to the negative representations of PRM. PRM may be considered simply as too slow or inefficient in the communication of its outcomes to the applicants. It shows also that the respondents, such as the sociologists of science, consider that the choice of reviewers by the programme manager is decisive for the process. Badly informed, this choice may lead to undesirable consequences—nonsubstantive review, conflicting review, etc.—and thus to negative representations. Finally McCullough emphasises the ambivalence of the respondents: while two-thirds of them agreed with the statement that "NSF is not likely to fund high-risk exploratory research because the likelihood of obtaining favourable reviews is slim", two-thirds of them nevertheless consider NSF as their first choice of funding agency.

2.3. PRM as a controversial issue

These last sociological studies devoted to the scientists's representations lead us to consider PRM as a controversial issue. PRM undeniably plays a central function in Western scientific communities. It is sometimes described ironically or not as the "holy cow of science" (deVries, 2001). However this does not mean that PRM is not a debated issue within these scientific communities. A rapid bibliometric study using the Web of Science database shows that PRM as a main topic of discussion is in constant growth in scientific publications between 1970 and 2010. With the exception of *Scientometrics*, the journals that count for more than 0.5% of the total of references (n = 4187) are not STS journals, but the most prestigious interdisciplinary journals—*Science* (3.3%), *Nature*[10] (2.9%), *Scientist* (1.9%) —, medical journals—*Journal of American Medical Association* (2.8%), *British Medical Journal* (2.4%), *New England Journal of Medicine* (0.9%), *Lancet* (0.8%), etc. —, physics and chemistry journals—*Abstract of papers of the American Chemical Society* (1.4%), *Journal of Nanoscience and Nanotechnology* (1.2%), *Physics Today* (0.6%), etc. In other words, PRM is not just a subject of interest for sociologists of science (or historians, philosophers, etc.), it is primarily a matter of heated debates for scientists themselves but also for administrators and politicians.

Table 1

Basic Assumptions and/or Contentions	
Pro	**Con**
The current system is open; it is free from substantial biais	The current system is closed; it contains substantial bias ("an incestuous buddy system")
The system leans over backwards in favour of the maverick	There is a natural biais against revolutionary and innovative ideas
It is possible for programme managers to manipulate the system to get the review they want but this is not being done	Programme managers do manipulate the system to get the reviews they want
Proposals should not be "blind reviewed" since it is not only difficult to conceal completely the identity of a proposer but it is "a significant factor in determining the likelihood of success of a project"	Proposals should be "blind reviewed" so that "the reviewer cannot play favourites or be biased by his knowledge or ignorance of the proposer"
Reviewers should not be selected at random because the most knowledgeable persons would thus be eliminated	Reviewers should be selected at random because this would "eliminate the possibility of the programme manager purposefully biasing the review through selecting reviewers whose opinions he can predict"
"The system should be designed on the presumption that programme managers and reviewers are, on the whole, honest and ethical, but that vigilance should be maintained over the system in such a way to insure that unscrupulous acts are rare"	It is "best to design decision making systems defensively, ie., on the presumption that the proportion of dishonest or unscrupulous people among programme managers and reviewers is high enough to cause severe problems if those people have a significant opportunity to turn the system to their advantage"
"Applicants should receive verbatim reviewer comments or requests but should not know the identity of reviewers", "reviewers will be more candid on all aspects of the proposal if their identities are kept confidential"	"Applicants should received signed verbatim peer reviews or requests", "openness would result in more responsible and ojective reviews"
There should not be formal appeal procedures for rejected applicants; "formal appeal procedures will introduce adversary relationships into the scientific community that have heretofore fortunately been missing"	There should be formal appeal procedures for rejected applicants; "a procedure is needed to check peer reviw and ensure that important innovations are supported"
[Agency] should fund less research at colleges and less prestigious universities	[Agency] should fund more research at colleges and less prestigious universities

Reproduced from Mitroff, Chubin, 1979, p. 204.

To analyse this PRM controversy, sociologists have to describe the forms of negotiations between scientists over the best ways to implement the Mertonian norm of "organised scepticism". They also need to observe the forms of negotiations between the scientists and their environing communities, civic, economic, bureaucratic and/or political. The production of "autonomy" and "self-governance" for science is not a "scientific" process: it's a process in which scientists are only one type of actor (individual and collective) among many others. Based on the reading of a parliamentary report on the funding policy of the NSF, Mitroff and Chubin (1979) have proposed a dialectical representation of the two main sets of assumptions related to these negotiations, Pro and Con (see Table 1).

Beyond the census of assumptions and counter-assumptions, Chubin and Hackett (1990) emphasise the political/administrative dimensions related to this debate. Three general themes are discussed: public accountability, social utility, openness to non-academic judgment. PRM is politically criticized for taking the decision-making power "out of the hands of elected officials and their appointees and [to put it] in the hands of people who are not accountable to the public" (p. 29). The critics are also concerned about the potential blindness of PRM to socioeconomic needs. PRM enables the scientific community "to use public funds for its own purpose while ignoring the pressing needs of society" (ibid). Finally PRM is criticized for being a "black box" closed to non scientists: PRM "does not weight adequately the opinions of non-academic scientists" (Ibid.). Rethinking PRM implies for most of its critics not only abandoning a mix of scientism and elitism (Roy, 1985; Shapely, Roy, 1985) but also changing the relation of the scientific community to the concepts of public accountability, social utility (generally defined by politics) and civil society. It is possible to interpret a part of the transformations of the scientific expertise (the various experiments of "participative expertise" as models of democracy in science) observed during the last thirty years[11] as a by-product of this PRM controversy.

A technical and economic dimension has recently helped to increase the visibility of the PRM controversy: the recent advances in Information Technology. Internet, digital infrastructure and cloud computing are nowadays ordinary resources for the scientists. A first consequence of these advances has been the gradual adoption by the major scientific journals and publishers of the digital format. The cost of this digital shift is still widely debated by the scientific community.[12] A second consequence of these advances is the emergence of new modes of diffusion of knowledge (arXiv, CogPrints, Netprints, PhilSci Archive) free from any formalised PRM. Users of these open archives frequently describe PRM as an obsolete machinery that only tends to slow down the diffusion of knowledge. The comparative study of the practices of deposits (on arXiv) and submission (in journals) shows however that the reality is more complex (Bolhin 2004). A great majority of papers diffused through digital archives are also published, one or two years later, in traditional scientific journals. Scientists are now technically able to distinguish two logics long since intermingled in a single medium: a logic of contribution with digital archives, a logic of recognition and prestige with peer reviewed journals (Dubois, 2011).

3. PEER REVIEW IN EMERGING COUNTRIES: LESSONS FROM CURRENT SCIENCE IN INDIA

This last section combines the main points from the two previous sections in order to initiate an original case study. Cherkaoui clearly states that the *lessons* deduced from the data collected in Morocco are "valuable for any other system of higher education and research structure" (CU: 9). These lessons concern the relative balance between the "regular market" and the "secular market" for intellectual production. They concern also academics' perceptions of the main mechanism of evaluation in science. Moroccan academics in SHS act collectively as "peerless" scientists. We have illustrated the diversity of the research programme dedicated to PRM and the assumptions and counter-assumptions related to the PRM controversy.

Following Cherkaoui's general insight, this last section offers a sociological journey from the Maghreb to South Asia, and more specifically India. The Maghreb countries and India have obviously a lot of differences: geographical, historical, cultural, political demographical, etc. They share however a colonial past and a struggle to establish not only political independence, but also a national scientific tradition partly built upon Western standards (France for the Maghreb countries, United Kingdom for India). As previously emphasised, it is important to keep in mind that, for the Maghreb countries as for India, a significant part of the dynamics of science and technology came with European colonial expansion.[13] These colonial roots of modern S&T in India have helped make their social legitimation more complext in comparison to other (traditional) modes of production of knowledge.

In the first part of this third section we describe the textual corpus used for the analysis—mainly scientists correspondences dealing with various aspects of PRM. The source of our corpus is one of the oldest interdisciplinary scientific journal in India: *Current Science*.[14] The second part of this section analyses our corpus from the perspective of the attitudes toward PRM. We propose to distinguish between three models of attitudes but also to highlight the degree of specificity of the ambivalence of Indian scientists's attitudes about PRM.

3.1. Institutional Context and Empirical Material

CU's large scale analysis of SHS in Morocco is the outcome of several empirical and bibliometrical studies conducted between 2005 and 2009. Our intention is not to compete with such a large scale research design. We propose a preliminary approach of the perceptions of PRM in India through the study of the public diffusion of scientist's opinions in the interdisciplinary journal *Current Science*.

Current Science [CS] was founded in July 1932. Its founding intertwines with the development of the main research organisations in India: the Indian Institute of Science (IISc) and the first National Academy of Science. Conceived in 1896, by the famous industrialist J.N. Tata, but authorised by the British Government only in 1909, IISc really started in Bangalore in 1911 headed by the chemist Morris Travers. Travers's aim was to build IISc along the lines of the British Imperial College of Science and Technology. One of his last British successors[15]—another chemist, Martin Forster—proposed to create the first "Indian Science News Journal", patterned after the journal *Nature* founded in November 1869. The Board of Editors of CS was rapidly assembled: F. H. Gravely (Superintendent, Government Museum, Madras), C.R. Narayana Rao

(Professor of Zoology, Central College, Bangalore), V. Subrahmanyan (Professor of Biochemistry, Indian Institute of Science, Bangalore) and B. Venkatesachar (Professor of Physics at Central College). Toward the end of 1930 the Government initiated a consultation on the desirability of forming a National Research Council. At the same time, the Editor of Nature, Sir Richard Gregor, visited India to meet the editors of CS to promote the idea of an Indian Academy of Science. In May 1933, editor C.R. Narayana Rao published an unsigned editorial entitled: "An Indian Academy of Science". This editorial presents the founding of this national Academy as the only way to "secure closer and better organised co-operation of activities among all research institutes in India". At that time, the Academy was conceived with great ambition as "a company of thinkers, workers and expounders comprising members of the New Estate upon whose achievements the world must in future depend for the preservation and advancement of civilisation" (Rao, 1933: 335). Seventy years later, Balaram, director of IISc in Bangalore (and editor of CS) recalled that "the founding of the Indian Academy of Sciences at Bangalore under the Presidentship of C.V. Raman was a result of this appeal".[16] Chronologically this Academy created in April 1934 was the first to be registered with a national name in India. The Indian National Science Academy (New Delhi) and The National Academy of Sciences (Allahabad) were founded respectively in 1935 and 1936.[17]

Just like its founding model—*Nature*—, CS publishes various types of papers in English:[18] full length research articles, shorter research communications, review articles, comments on recently published research papers, interviews with scientists, book reviews, editorials, scientific correspondence, commentaries, opinions, etc. To build our corpus we have chosen to focus mainly on these four latter types of papers: correspondence, commentary, opinion, editorial. All these textual units are deliberately produced to publicly communicate the author(s)'s personal vision, opinion or feeling about various topics related to S&T. The correspondence intended to be published has not the same degree of informality and permissiveness as strictly private correspondence. However the criteria used for their publication remain different from those generally used for research articles (short or long) or book reviews. PRM for example does not apply for these types of publication. And it is not infrequent to see readers using the correspondence section of CS precisely to complain about the absence of selectiveness and reviewing.[19]

Using the online query engine of CS with three main criteria—type of document (one of the four mentioned), occurrence in the document of the term "Peer Review", period of publication between 1990 and 2013—we produced progressively a corpus of more than 200 textual units (209) corresponding approximately to a total of 250 000 words. Figure 1 and Table 2 below show different aspects of this corpus. Figure 1 describes the distribution of the corpus by year and type of document. The year 2001 may be interpreted as a pivotal year. The period before (from 1990 to 2000) represents 26% of the corpus. The period after (from 2002 to 2013) represents 62% of the corpus. The main reason for the important increase of references in 2001 (12%) comes partly from the controversy that arose from a report from the Indian University Grants Commission (UGC) recommending the funding of graduate and post-graduate (BSc and MSc) courses in astrology. The main types of documents that compose the corpus are by decreasing order of importance: correspondence (62.9%), editorial (18.5%), commentary (7.8%) and opinion (7.3%).

Text not clear. Better diagram available?

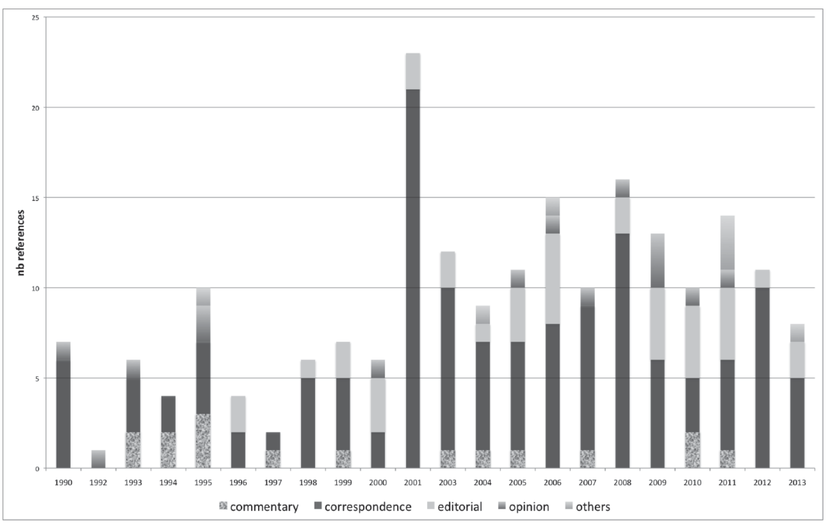


Figure 1: *Corpus* Current Science *(n = 209)—distribution by type of documents (period: 1990–2013)*

Table 2 enables us to define precisely different variables related to this corpus. First, the geographical situation of the authors. Although CS published correspondence, opinion, etc. from international scholars (but mainly from the USA, 12% of our corpus), Indian scientists are the most frequent contributors. Table 2 lists the 15 most common geographical localisation of Indian contributors by decreasing order of frequency. It is no surprise to observe that cities listed in the first column of Table 2 concentrate the main resources—organisational, technical, administrative—of S&T in India. The fact that the editor of CS is the director of IISc in Bangalore may also help to reinforce the relative weight of Bangalore compared to New Delhi, Hyderabad, Pune or Mumbai.

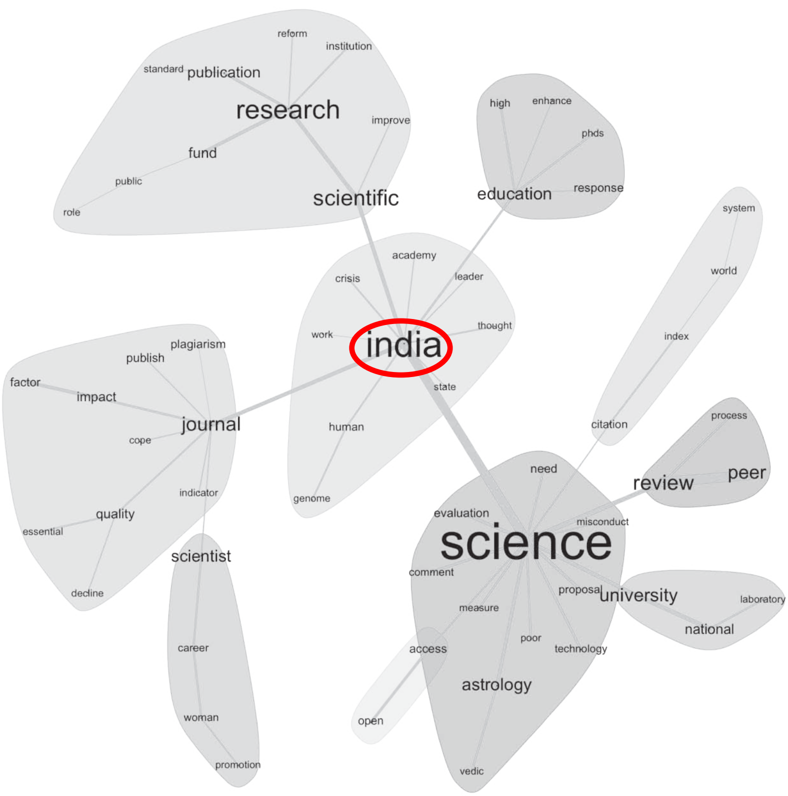
The second column of Table 2 shows the 15 main disciplinary affiliations of authors. If we consider only the disciplines that count for at least 5% of the corpus, we have five disciplines left: biology and biomedical sciences (18% of the corpus), physics (9%), agronomy (5%), computer science (5%) and chemistry (5%). The absence of any academics from social and human sciences in our corpus—at the exception of economics

Table 2: *Geographical, disciplinary and lexical (words and lemmatized words in titles) distribution of the corpus—ordered by decreasing frequency order*

Main Cities	**Disciplines**	**Most Frequent Words in Titles**	
Bangalore	biology & biomedical sciences	science	impact
New Delhi	physics	India	response
Hyderabad	agronomy	research	publish
Pune	computer science	scientific	plagiarism
Varanasi	chemistry	review	need
Lucknow	genetics	university	factor
Mumbai	pedagogy	journal	evaluation
Chennai	veterinary	peer	access
Palampur	geology	education	proposal
Indore	geophysics	astrology	open
Amritsar	zoology	scientist	human
Annamalai Nagar	mathematics	publication	citation
Chandigarh	ecology	national	world
Ahmedabad	mathematics	fund	woman
Mangalore	earth sciences	quality	technology

and political science—is explained by CS's general orientation. Like *Nature*, CS is a multidisciplinary scientific journal focused mainly on natural sciences. The disciplinary categories are produced on the basis of authors's self-declaration. In addition to their affiliation, address, etc. authors generally mention their exact speciality: Cytogenetics, Cellular and Molecular Biology, Solid State and Structural Chemistry, etc. Listed categories of table 2 are the product of a process of simplification and aggregation based on these self-declared affiliations. The weight of the first five categories comes partly from this simplification-aggregation process. It is however relevant to certain historical and contemporary characteristics of the Indian organisation of science and technology. The first Indian Institute dedicated to scientific research was the Indian Association for the Cultivation of Science (IACS). The Institute, founded by Mahendra Lal Sircar, was established in Kolkata in 1876 and focused mainly on chemistry and physics. During the first half of the twentieth century, IACS and IISc dominated basic scientific research in the physical sciences. Four years after Indian independence (in 1947), the first Indian Institute of Technology (IIT) was established in Kolkata with the aim to develop world-class engineering training and research, following the Massachusetts Institute of Technology example. Jawaharlal Nehru's policy largely contributed to the reinforcement and multiplication of these institutes.[20] The IITs focused primarily on mathematics, physics, and engineering. Although the biological and life sciences were institutionalised much later (in the 60s), and mainly through the departments of physics and mathematics of the Tata Institute of Fundamental Research in Mumbai, they are nowadays considered as a policy priority and a strong component of the national science organisation. Vale and Dell recently inventoried the main Institutes and Universities conducting life science research in contemporary India.[21] It is commonly assessed that the Indian biotechnology sector is one of the fastest growing knowledge-based sectors. Prestigious international scientific journals, such as *Nature* or *Science*, regularly underline the importance of biotech evolution in India, as well as some of its fragilities and risks.[22]

The last two columns of Table 2 list the thirty words most frequently used by the authors (or editors) in the titles of the references. These two columns show the main topics discussed: scientific publication and scientific education, demarcation between science and pseudo-science (astrology), criteria of research funding, misconduct and fraud, the difficulty in measuring the quality of publication, the place of women in the scientific community, etc. Most of the time, the letters, commentaries or opinions are not intended to communicate technical ideas or scientific results. These texts mainly deal with the organisational, economic and political infrastructure of science conceived as a necessary condition to the production of these ideas and results. These two columns should be read with Figure 2 in mind (see below). This figure is a co-occurence graph (a symmetrical network) produced from the titles of our references. It shows the main co-occurrences of words and their intensity through the proportional thickness of the ties between the edges.



Change to “India”?

Figure 2: *Graph of co-occurrence of words (lemmatized) in the titles of references (software: Iramuteq,[23] algorithm: Fruchterman Reingold)*

It is no surprise to see on Figure 2 that the words "Peer" and "Review"—or "Human" and "Genome" or "Open" and "Access"—have a strong relation of co-occurrence. It is however more interesting to notice that the topics of scientific publishing or scientific journals are frequently discussed through several terms: "impact", "plagiarism", "indicator", "quality" defined as "essential" but possibly in "decline" … The issue of "evaluation of science" belongs to a cluster composed of terms like "measure", "need" (ethics and social needs), "poor" (as in poor country, poor quality of science…), "astrology", "vedic", "open access" (i.e. free access vs commercial access). The issue of scientist's "career" is discussed from the perspective of "women's" social emancipation and occupational "promotion". In a sense, these terms and their clustering describe the dual dimension of our corpus. The graph displays some general thematics that concern all international scientific communities, but it implements them in a specific national and cultural context which potentially help to enrich them.

3.2. Three Regimes of Attitudes about Peer Review

This delicate balance between general and particular aspects of scientists' attitudes is described in this last part through the study of our corpus. As we have seen in the previous section, PRM is not just a theoretical or empirical research question for sociologists, historians or philosophers of science. It is a regular topic of discussion for scientists themselves. As the scientists' attitudes could not be analysed here in full detail, we intend to stick with a general preview of their main characteristics. Most of them share an alarming perception of the state of science in India. Scientists write letters to communicate about their practical, financial, organisational difficulties. They frequently manifest their difficulties to act in conformity with the standards of international science. They manifest their frustration at not being socially recognised or fairly evaluated by national or international funding agencies. They communicate about their vision of possible changes in the organisational structure of science … The visibility of these "same old boring discussions", to use C.R.N. Rao's expression, that fills the correspondence section is partly related to the nature of this section itself. It is reasonable to think that dissatisfied scientists are more likely to take the time to write and send a letter to CS than satisfied scientists. Whether the letters, commentaries or opinions published in CS reflect general perceptions remains difficult to evaluate. In this matter only an in depth sociological survey, such as Cherkaoui's study on Morocco, could produce a satisfactory answer.

With this possible bias in mind, we distinguish between three general regimes of attitudes about PRM. The first is called *The Deficit Regime*. It is implicitly used by Cherkaoui in his analysis of the SHS community in Morocco. If academics do not constitute a "real" scientific community, it is because for various reasons (objective and subjective) PRM is missing. PRM embodies the meritocratic values of science and its intellectual and organisational lack is the source of the absence of autonomy in the scientific community. The second regime is called *The Dysfunctional Regime*. It corresponds to a critical and sometimes ambivalent attitude. PRM is described as a key feature of science but is also, at the same time, criticised as a collective tool able to produce, through its concrete implementation, unexpected problems that need to be solved. In contrast to the first regime of attitudes in which PRM is mainly defined indirectly (and positively) through the consequences of its lack of influence, this second regime focuses directly on the complexity of the modalities of this influence. Finally, the third regime is called *The Enrolment Regime*. In this last regime, attitudes toward PRM focus mainly on its capacity to be instrumentalised by various types of actors to serve their aims and/or their interests. These aims or interests may be intrinsic to the scientific community, but they could also be extrinsic (commercial, political, religious, etc.). In contrast with the two previous regimes, the attitudes belonging to this third regime substitute for the alleged neutrality of PRM (idealised in the deficit regime or possibly biased in the dysfunctional regime) alleged motives, intentions or desires that contribute to shape its social enrolment.

Deficit regime

The first Regime is built on the assumption that PRM is a consensual property of modern science.[24] It is generally omnipresent in numerous contributions aiming to denounce the Indian scientists difficulties to act in conformity with international standards. As already mentioned, the dominant tone of our corpus is alarming. The optimistic try to keep a certain balance by producing a mixed picture.[25] But most of the time, the contributions are one-sided and focus exclusively on the problems to be solved. A first problem is low international visibility. Indian research institutions do not appear as top institutions in the international rankings. In spite of their considerable number (including the various university and college departments), there seem to be, according to CS contributors, no "India shining" in international science.[26] This low visibility is generally associated with a second problem: the low quality of science produced. Using Western science as a benchmark, Indian science is frequently generally assessed as "in decline",[27] "substandard" or "dispensable".[28] Hence the obvious difficulty for Indian scientific journals, fed by low quality research, to be referenced in international databases. Contributors regularly remind us that very few journals (between 10 to 20 according to estimates) among the 2000 published in India are referenced in the Science Citation Index, and worse still that these few referenced journals have a low impact factor most of the time. International reports on S&T indicators are also regularly cited for communicating about the decrease of India's output of research papers—compared to China or South Korea—but at the same time the increase of attested fraud or plagiarism within the Indian scientific community.[29]

Where do these alarming characteristics come from? A lot of contributors consider that they are by-products of the difficulty of implementing a real PRM within the Indian scientific community. This absence of a "credible" PRM in India is supposed to generate the low quality of science that produces the low visibility of papers published in scientific journals and consequently the low visibility of journals and research institutions within the international community. The same absence of PRM accounts for the increasing importance of misconduct and plagiarism. The reasons for this absence of PRM are multiple. We focus on four of the most regularly cited reasons.

First, the nonexistence of the scientific community itself. Just as in the Moroccan case study, the difficulty to implement PRM is regularly traced to the absence of a collective "feeling" of belonging. Indian's scientists do not act as if they were members of the same "community".[30] They do not share "common values".[31] And choosing frequently to submit their papers to non-Indian journals (with higher impact factor) they consolidate the general lack of self confidence of local scientists.[32]

Second, the importance of bureaucracy and bureaucratic criteria. A lot of contributions emphasise the weight of the bureaucracy and the difficulty for scientists to have a real sense of autonomy.[33] The criteria of age or seniority—independently of the quality of the research conducted—is described as decisive for career advancement.[34] And the role of "scientific bureaucrats" is criticised for giving credence to the charge that science is not done properly or not done at all in India.

Third, the absence of educational support for PRM. Contributors frequently relate the absence of credibility of PRM with the difficulty in having a strong interaction between university teachers and research scientists of the national laboratories funded by various agencies (CSIR, DST, OBT, ICMR, etc.). Students do not have the PRM culture, simply because of the disconnection between education and research.[35] Most teachers are described as considering their job primarily as giving information: "But Science cannot be taught without doing it". Teachers are also frequently considered as responsible for the absence of students education about ethical issues involved in the practice of science.

Fourth, the influence of socio-cultural factors: as previously noticed, for science to be fully developed, it has to be collectively acknowledged as a value in itself. A lot of contributors highlight the possible tension between the values incorporated in PRM and the general values of Indian society. In terms of social prestige for example, scientists are described as "low on the ladder of social acceptability in [the] country".[36] This low prestige helps to reinforce the brain drain process that draws the best trained and qualified scientists toward the United Kingdom or the USA. More fundamentally, PRM is described as embodying the meritocratic values of science, but these values may have a conflictual relation with the hierarchical nature of Indian social organisation.[37]

Dysfunctional regime

The second regime shares with the Deficit Regime the general idea that PRM is a core mechanism in modern science but it does not however correspond to an unilateral perception of its value and its consequences. Whereas the Deficit Regime, focusing on the cause and consequences of its absence, assumes that PRM is an uncontroversial international standard, the Dysfunctional Regime emphasises its possible bias or unintended/undesirable consequences. And through the discussion of these biases and consequences it reasserts the way PRM should ideally work. The Dysfunctional Regime corresponds to a critical attitude toward PRM aiming to reduce the discordance between its supposed or idealised functioning and its observed implementation viewed as unsatisfactory or frustrating.

Most of the criticisms formulated by CS contributors have been detailed, at least in their principle, in the previous section (cf. Table 1). PRM is considered to be highly dependent on the choice of peers. This choice is frequently difficult for structural reasons. As the number of journals is rising rapidly, as academics are also institutionally encouraged to publish more frequently, finding competent referees becomes increasingly difficult.[38] A lot of contributors share publicly their regular experience of being requested by editors to review papers on scientific topics not related to their expertise.[39] PRM is also considered as highly dependent on the ethics of editors, peers or programme managers. PRM is ideally an "honour system" which supposes that reviewers do their job as an "act of community" without remuneration promptly and objectively. Contributors generally highlight the openness of the system to abuse and deviance. The clause of "anonymity" associated to PRM is frequently considered as a questionable mode of implementation that serves only the interests of the reviewers[40] and helps to slow down the diffusion of real innovative ideas.[41] This lack of transparency concerns also the funding agencies and their administrative procedures. Asking for "respect", the declined applicants regularly denounce the difficulty of obtaining useful information, if any, about the weakness of their proposal.[42] The gender bias is also a source of concern. PRM is theoretically blind to gender but in practice peers are mostly male scientists.[43] If the occupational inequality of men and women in science does not concern India alone, it takes on a different meaning for a population in which the majority still believes that the sole career expected for a female child is that of a "suitable marriage".[44]

Beyond the description of these possible biases, an argumentative basis of the Dysfunctional Regime is a variation of the Mertonian Matthew Effect. This effect consists, according to Merton (1968), "in the accruing of greater increments of recognition for particular scientists of considerable repute and the withholding of such recognition from scientists who have not yet made their mark". Once transposed to the distinction between core scientific nations (scientists of "considerable repute" in Western countries) and peripheral scientific nations (scientists "who have not yet made their mark" in emerging countries), PRM is viewed as systematically (but not intentionally) disadvantaging Indian scientists compared to their Western scientists, and mainly North American colleagues. The logic is simple to understand: Indian's scientists suffer from low international visibility. Knowing that Indian journals are generally not read outside India, the best of them try to gain visibility by submitting their papers to international journal with good reviewing and good exposure. Knowing also that there are very few Indian scientists who are likely to act as reviewers for international journals, there is little need for these authors to be careful in citation of Indian work. By doing so—choice of publication, choice of citation—they contribute automatically and collectively to the incremental increase of difference of quality between Indian journals (which cannot benefit from the best research done in the country) and International journals and reinforce the general perception of Indian science as a "substandard" science.[45] And, ironically, this is precisely this preexisting reputation that prevents the very few scientists that have the opportunity to be published in international journals to be normally cited by their Western colleagues.[46] It is important to note that this issue on whether PRM in Western journals is systematically biased against scientists from developing or emerging countries is not discussed only within Indian scientific journals but also in international journals, and generally in order to measure and correct this possible bias.[47]

Enrolment regime

Finally, the third regime—the Enrolment Regime—distinguishes itself from the two previous regimes by the radicalness of its perception of

PRM. If the Deficit and Dysfunctional Regime share the general idea that PRM symbolises the values of modern science (the latter being more critical about the implementation of these values), this third regime considers these values as a form of "occupational ideology" produced mainly for non-scientists. With this third regime, PRM is a strategic device whose real function is not to distinguish good science from bad science (even though the dysfunctional regime shows that PRM doesn't work all the time). Instead, PRM's undisclosed function is to serve the interests of different categories of actors (scientific, economic, political, etc.) and to give them social authority or social power.

Thus, the CS contributions can be read as a list of actors (individual or collective) trying to take advantage of the symbolic or material value of PRM. The scientists themselves are frequently accused of using PRM to fund research that interests no one else.[48] PRM gives them the opportunity to remain safely blind to the social needs of their environment. In the controversy that arose after the UGC decision to introduce astrology in universities, they have been charged with using PRM as a way of masking their "hidden fundamentalism".[49] According to their opponents (also sometimes members of research institutions or universities), their social authority is supposed to discard on principle the idea that some achievements of modern science may have their roots in traditional Indian knowledge, the Vedas and the Upanishads. Academic publishers are also frequently criticised for transforming scientific publishing—Peer Reviewed Journals—into the playing field of market monopolisers.[50] The debate about academic publishing and open access in India is complicated by the local proliferation of "pirate journals" and "predatory publishers" that sell PRM as a marketing argument for scientists trying to be promoted on the basis of their publication count.[51] Among the different criteria generally used to identify these publishers some are directly related to their deliberate misuse of PRM:[52] spam requests for peer reviews to unqualified scholars, asking authors for suggested reviewers without sufficiently vetting their qualifications or authenticity, etc. The scientists and the academic publishing sector are not the only ones regularly charged with using PRM as a strategic device. CS contributors focus also on the capacity of PRM to be instrumentalised by political activists and industrial lobbyists. The controversy on transgenic crops or genetically modified (GM) crops is heated in India. Discourse about GM crops involves policy makers, technocrats, NGOs, scientists, industrialists, and farmers. Stakeholders (pro and con) are successively denounced for their deliberately unfair—asymmetrical—use of PRM: generally eager to use peer-reviewed publications that support their beliefs, they denigrate the same peer review system when such publications do not support their contentions.[53] Faced with ideological (from antibiotech activists) or commercial (from industrial lobbyists) uses of PRM, scientists are described in both cases as "unable to match [their opponents] in their strategies and actions".[54] More globally, PRM is sometimes interpreted as a mechanism directed toward the reproduction of inequalities between scientific communities from the developed and developing world. The capacity of Western countries to attract, through the implementation of PRM, the best scientific minds from emerging countries, and particularly India is considered as a quasi geopolitical problem. In 2011, among the approximately 50,000 PhDs awarded in the USA, 15,000 recipients were foreign nationals. India accounted for 2000 of them, and only a very small fraction of them intend to go back. This Western bias—the "foreign hand" hypothesis in a country still struggling with its colonial past—is not a just a matter of an unequal balance of topics of research or lack of creativity,[55] it is also viewed by CS contributors as a matter of production of national wealth and political independence.[56]

CONCLUSION

The *Crise de l'université* shows the relevance for sociologists of the analysis of international academic organisations. Cherkaoui focuses on the interaction between the political choices of the Moroccan government and the myriad of individual decisions produced by academics working in social and human sciences. A large-scale survey enables him to identify the general beliefs in which these decisions are grounded and an original bibliometrical database is used to test empirically the famous *two markets hypothesis* formulated by Raymond Boudon (1981).

Studying scientists' attitudes, Cherkaoui invites us to wonder about the subjective origins of scientific community. How do scientists working in the same area become a collective? When do academics start believing in their own collective existence and consider themselves as a "peer" among other "peers"? The noun "peer" (in the context of science and evaluation) is defined by the Oxford Dictionary as "one equal in civil standing or rank; equal in any respect". This simple definition recalls the normative dimension of the Peer Review Mechanism. For PRM to exist, scientists have to be confident in the fact that their colleagues consider them as equal in value and thus produce an objective assessment of their work. Following Cherkaoui's example, we proposed a case study on the attitudes of Indian scientists toward PRM. Our corpus—extracted from the Indian interdisciplinary journal *Current Science*—shows that PRM is a key issue for scientists to debate the general state of Indian science. There is however not just one but many attitudes toward PRM. We distinguished between three general regimes of attitudes. Each of them constitutes a different way to transpose general arguments, analysed by the PRM research programme in sociology of science, into the Indian context. It shows the necessity for sociologists to be careful about the differentiated social uses of PRM and to document empirically how scientists interpret its logic of autonomous social control through local (national) and global variables (regional or international). Our study is an invitation to pursue on a larger scale the empirical investigation of Indian scientists' attitudes and their consequences for the collective properties of academic life.

APPENDIX: REFERENCES CURRENT SCIENCE

REF	TITLE
CS1	School-based journals: a good idea for India
CS2	Editors be polite to your reviewers!
CS3	India needs to be cautious while following the American model of higher education and research
CS4	Some deleterious consequences of birth of new disciplines in science: the case of biology
CS5	Phds: uncomfortable questions
CS6	Excellence in science education and research
CS7	Bertrand Russell (1872–1970): calibrating the scientific productivity of a polymath
CS8	Physics students: attitude towards theoretical and experimental research
CS9	Science communication in multicultural societies
CS10	Ensuring credit for original thought
CS11	Self-plagiarism and conference proceedings
CS12	An algorithm and benchmarks for making world-class institutions
CS13	Open access: tearing down barriers
CS14	Research publications and templates for incremental research
CS15	Auditing academia: sherpas and stars
CS16	Research funding blues: need for reforms and transparency
CS17	Of science copyright and open access
CS18	Peer review contestations in the era of transgenic crops
CS19	Indian science: the need for public engagement
CS20	It is time to integrate science and technical education at the undergraduate level
CS21	Should we produce more Phds?
CS22	Structure of Indian science: suggestions on operation of competitive grants
CS23	Scientists papers and journals: coping with rejection
CS24	Peer review or mere formality?
CS25	Assessing colleges: teaching or research
CS26	Popular article is a neglected intellectual component in Indian science research publication
CS27	Critical review of letters essential to enhance quality and readability
CS28	Journals of plagiarism
CS29	Journals: costs and impact
CS30	Protecting our “emerging bylines” from plagiarism
CS31	In conversation with Rao
CS32	Indian media coverage of climate change
CS33	Public funding for research projects: roles of experts and finance officials in decision-making
CS34	Lack of inspiring teachers
CS35	DST questionnaire response analysis

CS36 Science in Indian journals
CS37 Peer review 1
CS38 Peer review 2
CS39 Poor science
CS40 Peer review 3
CS41 A modest proposal for glasnost in the peer review process
CS42 On being a scientist
CS43 The quality of scientific journals published in India: some random thoughts
CS44 Scientific research as a career: challenges and obstacles
CS45 Extra-mural funding of research: results from the work of the inter-agency committee
CS46 Science and technology in a poor country
CS47 What should India be doing in the human genome?
CS48 The measure of science and scientists
CS49 What should India be doing on the human genome?
CS50 What should India be doing on the human genome?
CS51 Crisis in undergraduate medical education in India
CS52 Quest: quality university education for scientific talent
CS53 The proposal for a national science university-some comments
CS54 The proposal for a national science university-some comments
CS55 Indian academy at crossroads
CS56 Career of women scientists
CS57 The proposal for a national science university-more comments
CS58 The proposal for a national science university-more comments
CS59 The national science university and the politics of science in India
CS60 The Indian scientist: some reflections
CS61 The Indian academy of sciences document on science education in universities: a criticism
CS62 Declining phase of quality research in our universities
CS63 Peer review under scrutiny
CS64 India's scientific community: a cultural crisis?
CS65 Popularizing science
CS66 Nurturing young scientists: role of department of science & technology
CS67 Coping with liberalization
CS68 Impact factors a note of caution
CS69 A statistically valid definition of bias is needed to determine whether the science citation index¨ discriminates against third world journals
CS70 Creativity in science
CS71 What ails Indian science? some suggested remedies
CS72 Funding basic science
CS73 Let us do justice to science
CS74 Evaluation of a phd thesis
CS75 How to improve the quality of scientific research in India
CS76 Journal publication in India: crisis or opportunity?
CS77 Peer review

CS78 Journal impact factors for the individual scientist: an unnecessary evil
CS79 A profusion of academies
CS80 Working scientists—who cares
CS81 Freeing science from the tyrannies of funding and peer review
CS82 Plagiarism: a spreading infection
CS83 The condition of science in India - further thoughts
CS84 Internet publishing
CS85 Mediocre research on the rise
CS86 The impact of publication lists
CS87 Why don't medical graduates join programmes in hard science?
CS88 Publication lists
CS89 Improving our scientific attitudes and capabilities through good teachers and leaders
CS90 Redirecting migrations: reversing the brain drain
CS91 American government stand on scientific misconduct and its relevance to the Indian scientific community
CS92 Improving research in India
CS93 Scientific integrity
CS94 Measuring science and missing generation
CS95 Supporting science
CS96 The vicious circle of poor science
CS97 Indian science and Indian journals
CS98 How 'national' or 'international' are symposia and conferences?
CS99 Publication standards
CS100 Indian journals: scope for improvement
CS101 Publishing wars
CS102 Use of sci-based publication counts
CS103 Threshold research support for university scientists
CS104 Current science
CS105 International citation analysis of materials research institutions
CS106 Decline of quality science in India
CS107 Higher education in a catatonic state?
CS108 Public peer review - an alternative to impact factors
CS109 Dramatically novel ideas
CS110 The foreign hand
CS111 Is there anything like ‹Indian science'?
CS112 Indian researcher: the reluctant tool maker
CS113 Reforms and funds crucial to enhance higher education and research in universities
CS114 Standard of scientific research publications
CS115 Decline in academia
CS116 Scopus[a] has wider scope than science citation index
CS117 Women, career in science and the X-chromosome
CS118 Thoughts for India's scientific renaissance

CS119 India's ambitions to be a world leader in S&T depend upon a drastic overhaul of the university system
CS120 Deemed university status to national laboratories: need for a national debate
CS121 Science funding in India
CS122 An idea for Indian education
CS123 Deemed universities and other universities
CS124 Ayurveda: putting the house in order
CS125 The pied piper of it
CS126 A scientist's search for identity
CS127 India's competitiveness and preparedness in science & technology for the coming decades
CS128 Some reflections on the pursuit and evaluation of science
CS129 Invisible excellence: scientists who save lives
CS130 Peer reviewing in Indian S&T journals
CS131 Seemingly missed identity of a scientist
CS132 Scientific ethics needs an integrated statutory model
CS133 Citation index and impact factor in scientific publications
CS134 Authorship criteria for maintaining healthy culture of research publications
CS135 Scientific truths and values
CS136 Crisis in the universities: increasing funding gap between universities and national laboratories/scientific research institutions - some solutions
CS137 What do third world researchers lack? documenting the peer review data
CS138 Values and scientific research
CS139 Coping with the journal review process
CS140 Downloads count. An early indicator for monitoring progress of science
CS141 Investigating misconduct in science
CS142 Response to modak
CS143 Response to modak
CS144 Sixty years of independence and state of Indian peer review
CS145 Journal impact factor: an essential primary quality indicator
CS146 Publishing in sci journals: why double standards?
CS147 Improved system of anonymous peer review of manuscripts
CS148 Science in the wilderness
CS149 C.V. Raman's work on scientific journals: legacy and lessons for Indian science
CS150 Journal impact factors - essential primary quality indicators - surely not so!!
CS151 Response to ranade
CS152 Peer review of manuscripts
CS153 Academic promotions: the dust has not yet settled
CS154 Science journals: issues of access
CS155 Charges of plagiarism
CS156 Misconduct in science
CS157 Observations on plagiarism
CS158 How India can provide immediate open access now

CS159 Web of science: science trapped in a spider's web
CS160 Research spending in science and technology: radical reform measures needed in the review process
CS161 Peer review contestations in the era of transgenic crops
CS162 The dynamics of open access publishing
CS163 Scientometrics: a dismal science
CS164 India as a global leader in knowledge economy
CS165 Cost effective utilization of existing resources for biomedical research in India
CS166 Anniversaries at the academies
CS167 Good governance accountability and responsibility
CS168 Is ‹rapid response' a future alternative to ‹letter to the editor'?
CS169 In defence of the 3 + 2 years system of post-school education
CS170 Indian biological sciences: aiming even higher
CS171 John Maddox: promoting science through nature
CS172 Biology in India
CS173 Economics and economists
CS174 Testing astrology
CS175 Funding delayed means research retarded
CS176 Worship of mammon
CS177 Ayurveda: scientific research and publications
CS178 Scientific research: stupidity and success
CS179 Scientific publishing: eroding trust
CS180 Extramural research funding by institutions that undertake intramural research
CS181 Grants officers on deputation to national research laboratories
CS182 Women, peer review and science
CS183 Research journals
CS184 Need of open access repositories for NARS in India
CS185 Research and the human element
CS186 What else can we do to enhance the scientific potential of India?
CS187 Science: pressures of a changing age
CS188 Citations
CS189 Creationism
CS190 Science
CS191 An unscientific way to bury astrology
CS192 The astrology fallout
CS193 UGC decides to set up departments of vedic astrology in universities
CS194 Astrology and science
CS195 Response to ganeshaiah
CS196 Vedic astrology
CS197 Vedic astrology
CS198 Academic leadership and the ailing state of Indian science
CS199 Jyotir-vigyan
CS200 Astrology and science

CS201 UGC's role in introducing astrology courses in Indian universities
CS202 Science and astrology
CS203 Astrology
CS204 Faith and rationality
CS205 Admission test for astrology
CS206 Natural calamities and pseudoscientific menace
CS207 Astrology and science awareness
CS208 Science and human culture
CS209 Whipping astrology - a science crime

NOTES

1. Thanks to Alexandra Frenod (GEMASS) for her careful reading of the manuscript.
2. With few exceptions such as Arvanitis *et al.* (2010) and Waast *et al.* (2010) that rely exclusively on data obtained from the King Abdulaziz Foundation library in Casablanca.
3. For a study of his disciplinary programme in sociology of science, cf. Dubois (2013a).
4. See for example the *Eurobarometer* 55(2), 2001.
5. For a general discussion of the sociological literature on the demarcation of science, cf. Dubois (2013).
6. According to Cherkaoui, half of the academic population studied has never published a single paper (cf. CU: 136). Authors having an institutional affiliation are only 1.3 times more likely to produce papers than authors with no academic status.
7. Cherkaoui estimates that the proportion of academics working only for the "regular" market of the "scientific community" is only 10% at most (cf. CU: 98).
8. According to this old boy hypothesis: "the proposals of eminent scientists who are members of the 'old boy network' are sent to other eminent scientists who give the 'old boys' favourable evaluations. Equally important, the proposals of non-eminent scientists, who are not part of this network, are sent to scientists who will give them lower evaluations than they deserve" (Cole, Rubin, Cole, 1978: 33).
9. See also Lamont (2009).
10. See for example http://www.nature.com/nature/peerreview/debate/.
11. Cf. for a summary of this transformation, cf. Pestre (2013).
12. See for example the mobilisation against the business practices of publishers like Elsevier http://thecostofknowledge.com/.
13. For a sociohistorical analysis of the circulation of specialized knowledges—natural history, terrestrial surveying, map making, law, linguistics and public administration—between Europe and South Asia, cf. Raj K. (2010). Raj aims to demonstrate that "South Asia was not a space for the simple application of European knowledge, nor a vast site for the collection of diverse information (…)

South Asia was an active, although unequal, participant in an emerging world order of knowledge" (p. 13).

14. http://www.currentscience.ac.in/
15. just before the first nomination of Indian director, C.V. Raman in 1933, three years after his Nobel Prize in Physics.
16. See Balaram (2003).
17. It should be noted that chronologically The Academy of Science of the United Provinces of Agra and Oudh was first registered on 4 December 1930. But its national name—National Academy of Sciences—came later, in December 1936.
18. CS currently publishes approximately 350 indexed papers by year (Science Citation Index).
19. This is the case of the famous Indian chemist C.N.R. Rao. In a recent "conversation", he indicated his concerns about the letters section of the journal: "I do not like most of the letters published in the journal. Letters are the same old, boring discussions of how we should evaluate research or something like that. Some of them should not be published" (Malhotra R., "In Conversation with Rao", *Current Science*, 100, 10, May 2011). Beyond the subjective dimension of this judgment, Rao emphasizes here an interesting characteristic of our corpus, at least sociologically: the regular concern (and the relative redundancy) of the letters published in CS about the problem of evaluation of science in India.
20. For a historical approach to science policy in India after independence, see Anderson (2010).
21. See Vale and Dell (2009).
22. See for example, Basu (2007).
23. http://www.iramuteq.org/
24. This property is regularly recalled through formulas such as: "there is nothing better than the peer-reviewed system to ensure quality in science" [CS17], "there is no alternative to the peer-review process" [CS33], "most important is the role of peer review in the examination of research proposals and manuscripts submitted for publication" [CS91], "Peer appreciation is the only ultimate reward a scientist awaits" [CS44], etc.
25. E.g., "There is much to be proud of and there are areas of inadequate performance" [CS22].
26. E.g., "A few of our top institutions contribute immensely in terms of human resource development and peer-reviewed publications. In spite of this, they are far below world standards in order to appear in the top 100" [CS12]; "I expected much better performance from India (…) I am a member of many international award committees and there are hardly any Indian nominations, let alone awardees. We should have at least 100 highly recognized scientists and at least 20–30 top institutions" [CS31]
27. E.g., "The consensus is that there is fast decline" [CS70]; the thematic of decline is used in many different contexts in our corpus: decline in research performance, decline in standards of education, decline in verbal and writing skill of students, etc.

28. E.g., "the quality of science produced in India on the average seems to he very much below the international level. This view has been expressed by many experienced Indian scientists. One begins to wonder whether the science generated in India is inferior and also whether the so-called better science produced by our senior scientists is also nothing to boast about" [CS43]; "The infrequency of notable Indian contributions to world science, the failure of many large projects to deliver tangible results (…)" [CS46]; "It may be argued, in some sense at least, that after the likes of J. C. Bose, p. C. Ray, S. N. Bose, M. N. Saha, S. K. Mitra, C. V. Raman, K. S. Krishnan, G. N. Ramachandran, Birbal Sahni, D. N. Wadia, etc., almost all the following generations (in science) could be regarded 'missing', as opportunity of doing science of 'far-reaching significance' is perhaps missed or lost" [CS94].
29. E.g., "Compared to earlier generations, training of students today seems to have become slack in the sense of not conveying a clear understanding of what is right and what is not in such matters" [CS11]; "India is seriously considering to form a national body to investigate the plagiarism and misconduct in science, spreading like cancer in our scientific community" [CS156].
30. E.g., "We need to create a viable scientific community (…) unfortunately it does not exist now in India" [CS55]; "(…) it does not take too much scrutiny of the scientific achievements from any great country which has made a sizeable impact on international science (UK, USA, USSR, France, Germany, Italy and Japan) to convince oneself of the 'sense of belonging' of its scientists as its nationals trying to project the work of their colleagues as if it were their own. And this stance is visible quite naturally and spontaneously, without the slightest effort at any 'pretence'. Any member of our scientific community who has interacted with his/her 'foreign' counterpart will not fail to testify to this common characteristic which binds them together (…)" [CS65].
31. E.g., "The scientific community needs really to reassert its ethical standards" [CS37]; "Irrelevance and mediocrity that commonly characterize the Indian scientific community, is due to lack of accountability and ethical and moral values" [CS138].
32. E.g., "For a community to exist, its members must be both contributors and beneficiaries. Home journals facilitate this. If scientists publish abroad, this consolidates the community's lack of self-confidence" [CS149].
33. E.g., "Universities in India don't work well because somebody is always sitting on your head, shouting at you, imposing rules against everything. You cannot do research because somebody won't allow you to spend the money you get for projects!" [CS31]; "Clearly, there is an implicit recognition, even in government circles, that our agencies for funding and promoting science are becoming enmeshed in bureaucratic problems"; "Unnecessary personalization, lack of transparency in procedure and over-bureaucratization have led to a culture based on ad-hoc decision-making and a mistrust of younger faculty" [CS127].
34. E.g., "A premier research science organization, the Geological Survey of India, still follows the doctrine of destiny, first come first served. A seniority list is

drawn which indicates the date of birth and the date of joining of a scientist in the organization. It is the fundamental and divine document that determines the fate of the scientists. It does not matter whether a scientist had achieved any distinction or award. His destiny is well defined in the gradation list" [CS80]

35. E.g., "We must educate our students on how to properly assess the importance of their research, and not to unnecessarily publish in 'a lesser journal'" [CS10]; "Many teachers of S&T have no access to modern research or even modern scientific literature to update themselves with. This is an important gap that needs to be bridged, if we have to attract young talent to the sciences. In Europe and the US, research scientists interact directly with undergraduate and even high school students; this is something that does not happen in India" [CS186].
36. E.g., "science [is] no longer seen as a prestigious profession in India" [CS55]
37. E.g., "Pursuit of science is the most democratic of all human endeavours. In spite of all the trappings of democracy, we are basically a feudalistic society and these attitudes tend to take their toll in science at senior levels." [CS59]; "Certainly, one factor of fundamental importance for fostering creativity is the 'social environment'. The worst social trait which stifles creativity is feudalism in the social system. This is the bane of most of our scientific and educational institutions. Mentor relationship is of utmost importance for fostering creativity" [CS70]; "Do we have the spirit and practice of an American-style bloodletting peer review in any of our organizations? If anybody has tried it even mildly in any national committee, the result will be his/her banishment from such committees" [CS94].
38. E.g., "a flood of invitations from scientific journals to review manuscripts that are not related to the addressee's research profile. ... I think the scientific world of publishing faces many problems and we do not need additional ones arising from unscrupulous people trying to make money out of our hard work" [CS2].
39. E.g., "(…) what prompted me to write this letter was the invitation from a medical journal to review a manuscript dealing with molecular mechanisms that determine memory maintenance – the only way I am connected with this topic is that I am myself struggling to remember things. If I had agreed to evaluate these submissions, I certainly could not have done justice given my total lack of experience in these fields." [CS24].
40. E.g., "If Copernicus or Galileo had to submit their ideas to peer review first, their efforts would never have seen the light of day. The anonymity that is now given to all peer reviewers is a licence to practice precisely this kind of scientific tyranny, giving them a mask behind which they can scrutinize and savage new ideas and stifle good and original research simply because it does not conform to the current fashions of accepted paradigms" [CS41]; "The present blind, peer-review process is flawed. Think of a jury system, where the jury stands to gain by the eventual verdict! In most cases, reviewers represent competing schools of thought - as they are active researchers in the same field. It is naive to expect objective views from reviewers who have vested interest" [CS139].
41. E.g., "(…) the peer reviewer is sheltered by this anonymity and there are numerous examples (…) where the reviewers have not been justifiably correct in their recommendations about the fate of a manuscript, so that the authors are left with

an ever burgeoning thought in their minds that they have been short-changed by the reviewer" [CS147].

42. E.g., "(…) the PIs need to wait for as long as 6–10 months to get any update. Although some agencies have started featuring acknowledgements on their websites, others continue with their archaic procedures. Mandarins at the funding agencies are generally rather curt (with rare exceptions) in their responses to any interim queries. Sometimes, the PIs get a response in 1–2 lines without any scientific evaluation report, saying: 'the proposal was examined and was not found suitable'. This seems like a 'summary trial' and shows disrespect to the investigators who have worked hard in preparing and submitting the proposals. It cultivates prejudice and dampens their enthusiasm" [CS19].
43. E.g., "much of the problem lay with the enormous power and authority given to a handful of Full Professors, all of whom at present are males" [CS56].
44. E.g., "Most MSc courses and PhD programmes in national institutions have a large proportion of women students. In some areas like biology women can even outnumber men. Inspection of available data on scientists and academic faculty members in diverse institutions, however, reveals that very few women continue to struggle up the scientific ladder. This attrition is undoubtedly a result of the difficulty in pursuing a career that demands an excessive investment of time, in the face of increasing family demands" [CS117].
45. E.g., "I have been told that when Indians send a paper to certain major journals of the world, there is an in-built perception that Indian papers are not of good quality; they look down upon Indians. Maybe there is some truth in it but we have to fight" [CS31]; "A corollary conclusion, to which many Indian scientists would subscribe is that many good Indian papers are cited fewer times than similar studies by Western authors" [CS86].
46. E.g., "(…) applying SCI to India is beset with problems because of (a) the extreme reluctance of western authors to cite work done in India and other developing countries; (b) the propensity of Indian authors to quote mostly western sources (probably to get fellowships and jobs in India and abroad, invitations to conferences, etc.); (c) the reluctance of Indian scientists to quote Indian authors" [CS43]
47. See Gibbs (1995).
48. E.g., "the scientists seek funds for research conceived by them. In turn, members of the same scientific community are asked to review such proposals. The system has thus become inward-looking". [CS59]
49. E.g., "it would perhaps expose the hidden fundamentalism of the scientists in trying to safeguard their own facade and beliefs as much as the religious lots have been doing … the initiative by the UGC and the government of India to introduce new courses clearly represents an open-minded attitude for the perusal of the unexplored domains of a body of knowledge accumulated at a time when the present practice of the science had not taken its roots. In this sense, this initiative should be viewed as an open-ended opportunity offered to access the scientific worth, logical basis and social relevance if any, of these subjects that are perhaps dying due to neglect by guardians of the new schools of knowledge" [CS191].

50. E.g., "The relationships between readers, writers, editors, publishers and buyers are extremely complex in the world of academia; sometimes bordering on the incestuous. Large publishing houses like Elsevier Science and Springer-Verlag are beginning to monopolize the world of science journals; a situation that promotes a seller's market" [CS154].
51. E.g, "I think the scientific world of publishing faces many problems and we do not need additional ones arising from unscrupulous people trying to make money out of our hard work" [CS2]; "Perhaps nowhere are these abuses more acute than in India, where new predatory publishers or journals emerge each week. They are appearing because of the market need – hundreds of thousands of scientists in India and its neighbouring countries need to get published to earn tenure and promotion" [CS28].
52. see http://scholarlyoa.com/.
53. E.g., "In India, the anti-GM lobby is using poor quality scientific papers, including the above, their own reports and opinions to fight its case against GM crops in the Supreme Court. Activists in Tamil Nadu are using such strategies to advise political parties to seek statewide ban on GM crops. Recently, a group called 'GMOFree India' resolved to make this an issue in the next general election" [CS18].
54. E.g., "Scientists are not trained to hold placards, shout slogans, mobilize crowds, or denigrate their so-called opponents" [CS19].
55. E.g., "There is a real danger that the 'topics and areas of research' that our scientists, especially younger postgraduate students, will tend to pick for pursuing will be determined not by what India needs, but by what may be 'fashionable', 'current', or 'frontier' in other countries as projected by Indian editions of foreign journals/magazines" [CS35]; "Much of the research in the large number of laboratories in teaching and research institutions suffers from lack of originality and innovativeness. Unfortunately, this applies even to the supposedly 'leading' and 'elite' research institutions. We tend to follow Western models of 'modern' research areas and often our 'scientists' continue to work on the systems that they became familiar with during their PhD or post-doctoral research. Very few Indian scientists choose a topic/area of research which is distinctly different from that during their initial training period. This provides little room for originality and innovativeness, and such research continues to confirm and reconfirm someone else's findings and/or interpretations" [CS96].
56. E.g., "we live in the real world compartmentalized into developed and developing countries with associated scientific communities with very uneven playing fields. Left to market forces it is inevitable that a disproportionate number of revolutions will originate in the better endowed scientific communities in the developed countries while those in developing countries will be almost permanently relegated to doing 'normal science'" [CS128].

REFERENCES

Anderson, R. (2010) *Nucleus and Nation: Scientists, International Networks and Power in India*. Chicago: University of Chicago Press.

Arvanitis, R., Waast, R., Al-Husban, A.H. (2010) "Social sciences in the Arab world", in *World Social Science Report*, Unesco Publishing.

Bakanic, V., McPhail, C., Simon, R. (1987) "The manuscript review and decision-making process", *American Sociological Review*, 52(5): 631–642.

Balaram, P. (2003) "*Current Science*: Then and now", *Current Science*, 85(7): ??–??.

Basu, P. (2007) "Indian biotech's bumpy road", *Nature*, 450: 580–581.

Ben-David, J. (1971) *The Scientist's Role in Society*. Chicago: The University of Chicago Press.

Bohlin, I. (2004) "Communication regimes in competition: The current transition in scholarly communication seen through the lens of the sociology of technology", *Social Studies of Science*, 34(3): 365–391.

Bouabid, H., Dalimi, M., El Majid, Z. (2011) "Impact evaluation of the voluntary early retirement policy on research and technology outputs of the faculties of science in Morocco", *Scientometrics*, 86: 125–132.

Bouabid, H., Martin, B., (2009) "Evaluation of Moroccan research using a bibliometric-based approach: investigation of the validity of the h-index", *Scientometrics*, 78: 203–217.

Boudon, R., (1981) "L'intellectuel et ses publics: les singularités françaises", in Reynaud J., Grafmeyer Y. (eds), *Français qui* êtes-vous*? Des essais et des chiffres*. Paris: La documentation française, pp. 465–580.

Cherkaoui, M. (2011) *Crise de l'université. Le nouvel esprit académique et la sécularisation de la production intellectuelle*. Geneva: Droz.

Chubin, D., Hackett ,E. (1989) "On the virtues of self-study", *Science, Technology, & Human Values*, 14(1): 96–99.

——— (1990) *Peerless Science. Peer Review and U.S. Science Policy*. New York: State University of New York Press.

Cole, J., Cole, S. (1973) *Social Stratification in Science*. Chicago: University of Chicago Press.

Cole, S., (1992) *Making Science. Between Nature and Society*. London: Harvard University Press.

Cole, S., Rubin, L., Cole, J., (1978) *Peer Review in the National Science Foundation*. National Academy of Sciences.

Cole, S., Simon, G., Cole, J. (1988) "Do journal rejection rates index consensus?", *American Sociological Review*, 53(1): 152–156.

deVries J. (2001) "Peer review: The holy cow of science", in Frediksson E. (ed.), *A Century of Science Publishing*, IOS Press.

Dubois, M. (2011) "La communication scientifique à l'heure de l'e-science: retour sur l'hypothèse mertonienne", in A. Klein, S. Proulx (eds), *Connexions. Communication numérique et lien social*. Namur: Presses Universitaires de Namur, pp. 49–64.

——— (2012) *Social Dynamics of Biomedical Research. An Actionist Perspective on the Sociology of Science*. Oxford: Bardwell Press.

——— (2013a) "'Private knowledge' et 'programme disciplinaire' en sciences sociales: étude de cas à partir de la correspondance de R.K. Merton", *L'Année Sociologique*, 63(2): 79–119.

——— (2013b) "La science, une activité sociale comme une autre? Controverses autour de l'autonomie scientifique", *L'Année Sociologique*, 63(2): 345–357.

Gaillard J., Krishna V., Waast R. (eds) (1997) *Scientific Communities in the Developing World*. New Delhi: Sage Publications.

Gibbs, W. (1995) "Lost science in the Third World", *Scientific American*, August 1995.

Gillespie G., Chubin D., Kurzon G. (1985) "Experience with NIH peer review: Researchers' cynicism and desire for change", *Science, Technology, & Human Values*, 10(3): 44–54.

Glänzel W., Gupta B.M. (2008) "Science in India. A bibliometric study of national and institutional research performance in 1991–2006", in Kretschmer, H. & Havemann, F. (eds). *Proceedings of WIS 2008*, Berlin, 2008. (http://www.collnet.de/Berlin-2008/).

Guetzkow J., Lamont M., Mallard G. (2004) "What is originality in the humanities and the social sciences?", *American Sociological Review*, 69(2): 190–212.

Hammouti B. *Comparative Bibliometric Study of the Scientific Production in Maghreb Countries (Algeria, Morocco and Tunisia) in 1996–2009 Using Scopus*. J. Mater. Environ.

Hargens L. (1988) "Scholarly consensus and journal rejection rates", *American Sociological Review*, 53(1): 139–151.

Kent M. (1990) "The peer review process: Confidentiality and disclosure", *The Journal of Higher Education*, 61(2): 198–219.

Kleiche-Dray M. (2009) "A history of Research Organisation", in Kleiche M., Waast R., *Evaluation of a National Research System: Morocco*. European Commission Study, pp. 40–72.

La Follette M., (1985) "Journal peer review and public policy", *Science, Technology & Human Values*, 10(1): 3–5.

——— (1992) *Stealing into Print: Fraud, Plagiarism, and Misconduct in Scientific Publishing*. Bekeley, CA: University of California press.

Lamont M. (2009) *How Professors Think. Inside the Curious World of Academic Judgment*. Cambridge, MA: Harvard University Press.

Langfelt L. (2001) "The decision-making constraints and processes of grant peer review, and their effects on the review outcome", *Social Studies of Science*, 31(6): 820–841.

McCullough J., (1989) "First comprehensive survey of NSF applicants focuses on their concerns about proposal review", *Science, Technology, & Human Values*, 14(1): 78–88.

Merton, R.K. (1938) "Science, technology and society in seventeenth century England", *Osiris*, 4(2).

——— (1968), "The Matthew Effect in science", in Merton R.K., *The Sociology of Science. Theoretical and Empirical Investigations*. Chicago: Chicago University Press.

——— (1973) *The Sociology of Science. Theoretical and Empirical Investigations*. Chicago: Chicago University Press.

Merton, R., Zuckerman H. (1971), "Institutionalized patterns of evaluation in science", in Merton R.K., *The Sociology of Science. Theoretical and Empirical Investigations*. Chicago: Chicago University Press, 1973.

Mitroff, I., Chubin, D. (1979) "Peer review at the NSF: A dialectical policy analysis", *Social Studies of Science*, 9(2): 199–232

Pestre, D. (2013) *A contre science. Politiques et savoirs des sociétés contemporaines*. Paris: Seuil.

Porter, A., Rossini, F. (1985) "Peer review of interdisciplinary research proposals", *Science, Technology, & Human Values*, 10(3): 33–38.

Raj, K. (2010) *Relocating Modern Science. Circulation and the Construction of Knowledge in South Asia and Europe, 1650–1900*. New York: Palgrave Macmillan.

Rao, C.V. (1933) "An Indian academy of science", *Current Science*, 1.

Rip, A. (1985) "Peer review is alive and well in the United States", *Science, Technology, & Human Values*, 10(3): 82–86.

Rossi, P., Waast ,R. (2009) "Detailed bibliometric analysis: Methods and outcomes", in Kleiche, M., Waast, R., *Evaluation of a National Research System: Morocco*. European Commission Study, pp. 74–100.

Roy, R. (1985) "The real defects of peer review and an alternative to it", *Science, Technology, & Human Values*, 10(3): 73–81.

Shapely, D., Roy, R. (1985) *Lost at the Frontier: US Science and Technology Policy Adrift*. ISI Press.

Shinn, T., Vellard, D., Waast, R. (2010) "La division internationale du travail scientifique", in *Les Cahiers de la recherche sur l'Education et les Savoirs*, ARES, 9.

? Synthesis Report, 4 Regional Reports, 53 country monographs, Bibliography) —CREST-IRDUNESCO,

Travis, G., Collins, H. (1991) "New light on old boys: Cognitive and institutional particularism in the peer review system", *Science, Technology, & Human Values*, 16(3): 322–341.

Vale R., Dell K. (2009) "The biological sciences in India. Aiming high for the future", *Journal of Cellular Biology*, 3(184): pp. 342–353.

Waast, R., Arvanitis, R., Richard-Waast C., Rossi, P. (2010) "What do social sciences in North African countries focus on?", in *World Social Science Report*, Unesco Publishing, pp. 176–179.

24

SCIENTISTS AND FIELDS

A Theoretical Case Study

Thomas J. Fararo
Distinguished Service Professor Emeritus of Sociology
University of Pittsburgh

John Skvoretz
Professor of Sociology
University of South Florida

INTRODUCTION

In the early 1970s, an attempt was made to set out a theoretical and mathematical analysis of the status equilibration of an actor through a combination of mechanisms. The approach taken was that of specifying mechanisms and combining them to form a system of differential equations that would generate outcomes that depended upon the parameters of the dynamical system (Fararo, 1970a; 1970b; 1972). Thus, the theoretical framework for these studies was characterized by generativity.

This chapter contains a new application of that framework to the case of the attained prestige or status of theoreticians and experimentalists in the sciences, with outcomes dependent upon the type of science—the opportunities and constraints it presents for theorizing and for empirical work—and upon the motivational mechanisms of theoreticians and experimentalists embedded in such a science. The generative logic of the approach seems especially appropriate for a volume that celebrates the contributions of Mohamed Cherkaoui, especially as presented in his book *Invisible Codes: Essays on Generative Mechanisms* (2005).

In the first section, the position of the scientist within science is given a mathematical representation in terms of its status aspect. In the second section, the mathematical model for the dynamics of scientific status is utilized to provide an abstract classification of the scientific milieu of a scientist in terms of certain of the parameters of the model. Also, this section provides an abstract classification of types of scientific actors, their actor orientations, in terms of other parameters of the model. In the third section numerical values of the parameters provide concrete illustrative cases.

The equilibrium positions of scientists of various orientations which lie on a continuum from more theoretical (theoreticians) to more empirical (experimentalist) are derived for each of the illustrative types of fields. The fifth section develops a measure of status inconsistency which arises naturally out of the dynamic model, and then provides an application to the cases studied in the prior section. Here the substantive question is: what magnitude of inconsistency must scientists with different orientations learn to live with in various types of fields? The chapter closes with some final remarks about the approach taken and its limitations.

1. REPRESENTATION OF SCIENTIFIC STATUS

The choice of science as a social setting for the application of the methods of status dynamics is dictated by several considerations. First, a multidimensional picture of the position of the scientist is a natural outcome of certain common distinctions made within science. Second, the model-builder and the reader may appeal to their intuitions very directly, since both constitute scientific actors. Third, the sociology of science has a strong tradition of ideas relating to questions of status (see, for example, Barber and Hirsch, 1962; Glaser, 1964; Hagstrom, 1965; Merton, 1957; Storer, 1966). For example, the Merton paper of 1957 argues that the scientist is strongly motivated by anticipated recognition for a contribution to science. We shall utilize this notion in the following intuitive description of the scientific actor, and then show how it can be represented in terms of mathematical concepts.

The scientific community may be regarded, in one central aspect, as a collection of actors organized around the pursuit of knowledge. This knowledge process is usually said to have two central aspects. First, there is the direct interaction with the phenomena of interest in order to map their properties and develop experientially-based generalizations about these properties. This may be termed the empirical aspect of the knowledge process. Second, there is the aspect concerned with the integrative problem that arises when a variety of properties and a variety of facts and generalizations emerging out of many different investigations require some coherent connection and derivation from a body of general principles. This may be termed the theoretical aspect of the knowledge process.

From the above description of the knowledge process, which is the focus of the scientific community of actors, it follows that the typical scientist will be characterized by colleagues (and self) as to two modes of contribution to knowledge: empirical and theoretical. Simultaneously, these modes of contribution to knowledge will be evaluated in terms of the appropriate norms. Since the scientist incorporates some of these normative considerations, to some extent, within a particular variant of the scientific role, it follows that there is real motivational significance to these two modes of contribution to science. A scientist may emphasize one rather than the other. His or her particular field may emphasize empirical more than theoretical contributions. For the general case, however, we allow for differential evaluation along these two basic dimensions.

In the general framework, there exists a given set of actors (A); a set of characteristics (C_1, C_2, …); a set of characterizations of actors in terms of these characteristics (c_1, c_2, …); and a set of corresponding numerical representations of the differential evaluations, these being termed valuations (v_1, v_2, …). Here c_i is a state of a characteristic with a corresponding value given by $v_i(c_i)$. This is the differential evaluation of actor i^{th} component property. It is called actor's status with respect to this characteristic and this differential evaluation, and denoted s_i.

For an application to science, let C_1 contain descriptions of possible contributions to science with a focus on the empirical side of science, and v_1 is the valuation of such possible activities or contributions. Similarly, let C_1 contain states or descriptions referring to the theoretical side of science with v_2 the valuation of such activities or contributions. Thus the scientific actor α is represented by,

$$s = (s_1, s_2)$$

where,

$$s_1 = v_1(c_1) = \text{valuation of an empirical contribution,}$$
$$s_2 = v_2(c_2) = \text{valuation of a theoretical contribution}$$

The framework deals with the dynamics of such a position, as the status vector is termed. For this reason a time index is needed. Let C_{it} refer to the characterization at time t on characteristic C_i. Thus there are time-varying characterizations of the scientific actor as his career unfolds. On the other hand, the valuations are mappings which represent common underlying values. Thus, the valuation of a contribution depends upon these shared values. The values change at a totally different time-order than do the characterizations of particular scientists. Thus to study the status dynamics of a scientific actor it is reasonable to take the value system as time-invariant. (In fact, it helps to define the nature of science in a given epoch.) Thus the v_i are not time-varying. It follows that the position of the scientific actor α at time t is given by:

$$s_{1t} = v_1(c_{1t})$$
$$s_{2t} = v_2(c_{2t})$$

To sum up, the description of science as a knowledge process with two basic components or aspects leads to a two-dimensional status description of the scientific actor. The position of the scientific actor is time-varying, shifting with shifting characterizations of his or her contribution to knowledge.

In Fararo (1970b; 1972), the theoretical basis for the valuation terms in the above conceptual structure was set out in detail by applying a general theory of human choice (Luce, 1959; Fararo, 1973: ch. 11). Luce's powerful choice axiom, framed within a probabilistic approach to choices, implies the existence of a ratio-level value scale (v) over the specific alternatives and subsets of alternatives with respect to any domain over which choices may be made. One example is the choice of a meal (alternative) on a menu (subset) drawn from a wider set of possibilities. For a domain in sociology, we can consider a specific job (alternative) among available jobs (subset) in the domain of occupations. An empirical study has demonstrated the theory can be applied to the measurement of job prestige(Skvoretz, et al: 1974; see also Fararo, 1973: Sect. 11.13). For the purposes of the present paper, we assume this general basis for the measurement of valuations without further elaboration.

To apply the dynamic model for status change developed in the earlier papers (Fararo 1970b, 1972) more needs to be said about the meaningfulness of the differentials $\frac{ds}{dt}$. These are limits of the corresponding ratios of small changes $\frac{\Delta s}{\Delta t}$. But, according to the conceptualization set out above, Δs is $v(\Delta c)$—a small change in status is given by the value of a small change in characterization with respect to a given variable:

Δs_1 = valuation of a small change in empirical aspect of contribution
Δs_2 = valuation of a small change in theoretical aspect of contribution

Actually the small change $v(\Delta c)$ defines a marginal value Δv analogous to marginal utility and then Δs_1 and Δs_2 are marginal values of prospective or actual small changes in the variable that has such value, such as any money-based quantity, e.g., income or wealth but also other kinds of changes. In the present context, in the case of the first status variable this means small changes in the empirical aspect of contribution, e.g., citing evidence or initiating a small empirical study. On the second dimension it means becoming somewhat more theory-relevant, e.g., a citation without detail of a relevant theoretical argument in the literature or sketching a very brief plausible theoretical explanation of an empirical finding. Thus a small change (Δs_1, Δs_2) is a change (Δv_1, Δv_2) arising from a small change in characterization (Δc_1, Δc_2) that occurs in a small time interval. In idealized limiting case, this is the pair of derivatives $\left(\frac{ds_1}{dt}, \frac{ds_2}{dt}\right)$.

2. CONSTRUCTION OF A DYNAMIC MODEL

A dynamic theoretical model will be constructed that will take the form shown in system (1) with all parameters positive.

$$\begin{aligned}\frac{ds_1}{dt} &= a_1 + b_1(s_2 - s_1) + z_1(K_{31} - s_1)\\ \frac{ds_2}{dt} &= a_2 + b_2(s_1 - s_2) + z_2(K_{32} - s_2)\end{aligned} \tag{1}$$

The analytical approach that yields system (1) employs the strategy of expressing the change in status in small time *dt* as a sum of terms, each due to a separate mechanism inducing status change (or status stability). This illustrates the notion that change is due to a combination of mechanisms but each is first defined in isolation from the others. Each mechanism will be called a *mobilizer.*

First, there is the mechanism called the natural mobilizer. In each component s_i the actor has a valuation which is held by participation in the community of actors for whom this common value system is defined. Therefore, the actor is motivated to act in the direction of increasing valuation. But this means upward movement on the status variable. In equations (1) above this mobilizer contributes the terms a_i. If the actor were motivated only by this mechanism and this led to a unit empirical contribution to knowledge, the scientific actor would shift empirical contributions such that from status s_1 at time t the status would move up to $s_1 + a_1dt$ at time $t + dt$. The same assumption holds for a unit of theoretical contribution to knowledge. Note that it is assumed that the valuation of a unit contribution is assumed to be the same regardless of the current status of the contributor. The relevant mechanism is described by the following where i = 1,2 and $a_i > 0$.

$$\frac{ds_1}{dt} = a_1 \tag{2}$$

If a_i is very low, the status s_i changes only slightly with an unit contribution and in the limit as $a_i \to 0$, the status approaches ascription for this actor in science. But for our interpretation we let $a_i > 0$, so that some upward mobility is potentially realizable by through empirical and through theoretical contributions. There are alternative forms of representation of the natural mobilizer, such as the theoretical model described in Fararo (1972), but for the present purposes we find (2) most suitable.

The terms in (1) involving the b_i parameters arise from a different mechanism, which involves balance or status equilibration efforts. The assumption is that an expectation exists that actor in science should balance empirical and theoretical valuations and that this expectation is internalized by the scientific actor. Then at any time an implicit comparison process occurs in which the actual status value s_i is compared with the expected value based on the current value on the other component. If we let the "keep in balance" expectation be represented by a line through the origin of the (s_1, s_2) plane, namely, $e(s_2) = ks_1$ with $k > 0$, then the status equilibration effect can be expressed as in equations (3) for $b_i > 0$:

$$\begin{aligned} \frac{ds_1}{dt} &= b_1\left(\frac{s_2}{k} - s_1\right) \\ \frac{ds_2}{dt} &= b_2(ks_1 - s_2) \end{aligned} \tag{3}$$

These equations describe what would happen if the scientific actor were a "pure equilibrator." The parameters b_i give the magnitude of the responsiveness of the actor to this equilibrating input. High values of b_2, for example, mean that the actor will be induced to act so as to change characterization in theoretical terms (e.g., engage in more or less theoretical activity) in a relatively responsive or rapid manner to bring it into line with the current empirical evaluation of that actor's work. If the theoretical status s_2 is much lower than that expected ks_1 of a person with empirical status s_2 then a high b_2 actor will respond with efforts to bring the work up to a higher level in its theoretical aspect. On the other hand, if s_2 is much higher than that expected of an actor with empirical status s_2 then the actor will be induced to shift to a "less theoretical" type of work. Clearly real scientists have expectations that are a more complicated shape than the linear model suggests, but it serves as an idealized first approximation. Finally, we let $k = 1$ in equations (3) for mathematical simplicity.

Status equilibration exists not only between the two components of the actor's position that are changeable, but also with respect to fixed aspects of characterization in science: most basically, the field of science in which the actor is embedded. Such fields are more or less conducive to empirical and to theoretical research and therefore to higher or lower expectations in regard to the two components of the actor's position. Let s_{3i} (i = 1, 2) be a third status, fixed in time, which gives the valuation of the actor's field in science. It is argued for the sake of generality of status principles, that based on the current place on the s_{31} and s_{32} variables there is an expected place on each of the dynamical statuses s_1 and s_2, respectively. For instance, a purely theoretical field—such as string theory in modern physics—will be characterized by a high valuation of its theoretical character relative to its empirical character. Then a scientist starting out in this field will internalize a motivation to more or less match the expectation for innovative theoretical work. Let $k_{31}s_{31}$ and $k_{32}s_{32}$ be these expected places in status terms. We let $K_{31} = k_{31}s_{31}$ and $K_{32} = k_{32}s_{32}$ so that the equilibration mechanism is given by:

$$\begin{aligned} \frac{ds_1}{dt} &= z_1(K_{31} - s_1) \\ \frac{ds_2}{dt} &= z_2(K_{32} - s_2) \end{aligned} \tag{4}$$

From (4), we see that when s_1 is below K_{31} the actor is induced to produce "better" empirical work according to this mechanism in isolation from other mechanisms. Similarly, when s_2 is below K_{32} the actor is induced to do "better" theoretical work. Similar remarks apply to values above the field expectations. For example, when s_2 is above K_{32} the actor is "too theoretical" relative to the given field expectations. Internalization of the field valuation by the actor is assumed, since for each i the v_{3i}-scale defining the term s_{3i} above is assumed to be held in a community of scientists including our actor. Finally, it should be noted that the z_i terms are again "responsiveness" parameters, interpretable as the rapidity of adjustment to field expectations by the particular actor.

We assume that $z_1 + z_2 = 1$ (or more generally a constant factor) under the interpretation that actors have a fixed ability to be responsive to field expectations and the more that an actor is responsive to theoretical expectations (that is, identifies as a "theoretician") the less responsive he or she can be to empirical expectations and vice versa.

The dynamic system (1) above is now given by summing the three mobilizer mechanisms that correspond to:

(1) upward mobility as a natural direction of motivation
(2) balance between empirical and theoretical aspects of work
(3) adjustment to expectations of the specific scientific field

3. TYPES OF SCIENTIFIC FIELDS AND SCIENTIFIC ACTORS

The above description of the model makes clear how we can think about classifying scientific fields. A field in which a scientist is located will be said to be theoretical if $K_{32} > K_{31}$: scientists in the field are subject to expectations for theory that exceed the expectations for empirical research. A field will be said to be empirical if $K_{31} > K_{32}$. (Below we sometimes will use the narrower term "experimental" as suggestive for intuitive interpretation.) A field is neutral if it is neither theoretical nor empirical. These are dominant orientations in the field, interpretable both as operative social expectations for aspects of research and as operative psychological mechanisms within the socialized actor.

A sub-classification will be constructed based on how established the field may be. The intuitive idea is that actors in old established theoretical fields are exposed to different kinds of opportunities from those in newly arising theoretical fields. A theoretician in a new field has high potentialities for mobility because of the "open vistas" of theoretical research recognized in the field but not yet exploited. To represent this idea, we shall refer to parameters a_i as the opportunity parameters. They refer to the potential speed of upward mobility apart from possibly constraining equilibration efforts.

A field may be said to be old established if a_1 and a_2 are both small and if $a_1 = a_2$. The idea of this equality, as opposed only to the magnitude assumption, is that the field is subject to pressures in the nature of science, to create both empirical problems and theoretical problems for research. Thus, in its evolution a field will arrive at some stable state in which the mobility possibilities for empirical workers and for theoreticians are fairly equal. This situation may not hold completely for any real science, but it is an ideal type of science to be denoted by the term *old established*.

A field is said to be *newly developing*, on the other hand, if both a_1 and a_2 are high. In a newly developing field, however, we cannot safely assume equality of mobility possibilities along both research dimensions. To say that a field is a newly developing theoretical field means that in addition to high values of the a_i we have a bias in favour of the theoretical work: $a_2 > a_1$. Analogously, in a newly developing empirical field—where, for instance, a whole array of new experimental problems is discovered—there is a bias in favour of empirical status: $a_1 > a_2$.

Table 1: *Types of Scientific Fields*

Field Type	Parametric Description
Old established theoretical field (OET)	$K_{31} < K_{32}$ Both K_{31} and K_{32} high values a_1 and a_2 relatively small $a_1 = a_2$
Newly developing theoretical field (NDT)	$K_{31} < K_{32}$ Both K_{31} and K_{32} moderate values a_1 and a_2 relatively large $a_1 < a_2$
Old established empirical field (OEE)	$K_{31} > K_{32}$ Both K_{31} and K_{32} high values a_1 and a_2 relatively small $a_1 = a_2$
Newly developing empirical field (NDE)	$K_{31} > K_{32}$ Both K_{31} and K_{32} moderate values a_1 and a_2 relatively large $a_1 > a_2$

In Table 1 this typology of scientific fields in terms of parameter values is given. One aspect of the parametric description has not yet been discussed: the magnitudes of the field expectations K_{31} and K_{32}. A new field is a field in which expectations for important work (in empirical and theoretical terms) have not yet crystallized at a high level. If the field is new, scientists cannot ascertain merely from the field identification of a person that contributions will be high calibre. Thus, in Table 1 the field expectations for a new field are described as merely moderate.

The above typology applies to the field in which the scientific actor is embedded. In effect, it says how one represents the milieu of the scientist in terms of the equations governing the status dynamics of the scientific actor. Turning now to types of scientific actors the main distinction of interest is specialization along the two dimensions. A theoretician is represented as a scientific actor for whom the responsiveness to field expectations concerning theoretical activity exceeds the responsiveness to field expectations concerning empirical activity: $z_2 > z_1$. An experimentalist, on the other hand, is identified by the inequality: $z_1 > z_2$. In the latter case, the expectation level K_{31} for the given field governs the actor's behaviour much more than the expected level K_{32} for theoretical activity.

On the other hand, all scientists are governed by the ideal that empirical and theoretical activities be coupled in mutual control loops. A theoretician will want a make a theoretical contribution that explains empirical phenomena and an experimentalist wants to conduct experiments to testify to some theoretical hypothesis. We can represent this aspect of the scientific actor by the identity: $b_1 = b_2$. This means that our actor internalizes a "symmetry bias" which is reflected in his responsiveness to deviations from the ideal of equilibration of empirical and theoretical work. We call this single parameter b.

4. THE FATE OF SCIENTIFIC ACTORS

Having provided a way of thinking about two types of scientific actors in four types of scientific fields, using the equations for status dynamics in science, we turn now to an illustrative case study of the implications of our dynamics for a scientific actor, calling attention to these implications for theoreticians versus experimentalists who differ from one another by placing much more emphasis on one dimension of field expectations than the other. Because of the highly abstract form of the earlier work (Fararo, 1972), this analysis will be conducted with definite numerical parameters illustrating each of the four types of field in which the scientific actor might be located. The aim is to explore two questions. First, what is the stable equilibrium position, if any, of scientific actors of varying orientations in the four types of fields? Second, for a given orientation, say, theoretician, how do these positions compare with each other? The second question is essentially asking how the stable status of the theoretician, for instance, depends upon the field, while the first question concerns whether such a stable position exists at all. The case study is undertaken with one numerical case for each of the four fields, as shown in Table 2.

As this table shows we always have b = .1 since our assumption is that this is a property of the scientific actor in any field. Also, in each field we say $z_1 = 0.25$ and $z_2 = 0.75$ identifies a theoretician while $z_1 = 0.75$ and $z_2 = 0.25$ identifies an experimentalist. The remaining values are chosen to satisfy the requirements of Table 1.

Table 2: *Illustrative Cases for Theoretician versus Experimentalist in Four Scientific Fields**

Type of Field	K_{31}, K_{32}	a_1, a_2	**Theoretician** z_1, z_2	**Experimentalist** z_1, z_2
Old established theoretical field (OET)	5, 10	.2, .2	.25, .75	.75, .25
Newly developing theoretical field (NDT)	2.5, 5	.4, .8	.25, .75	.75, .25
Old established empirical field (OEE)	10, 5	.2, .2	.25, .75	.75, .25
Newly developing empirical field (NDE)	5, 2.5	.8, .4	.25, .75	.75, .25

*b = .1 in all fields.

4.1. Equilibrium and Stability Analysis

To analyse these cases, the equilibrium position (s_{1e}, s_{2e}) can be determined by setting to zero the left hand side of equation (1) and solving for the values of s_1 and s_2 that satisfy the equalities, yielding:

$$
\begin{aligned}
s_{1e} &= \frac{(b_2+z_2)(a_1+z_1K_{31})+b_1(a_2+z_2K_{32})}{(b_1+z_1)(b_2+z_2)-b_1b_2} \\
s_{2e} &= \frac{(b_1+z_1)(a_2+z_2K_{32})+b_2(a_1+z_1K_{31})}{(b_1+z_1)(b_2+z_2)-b_1b_2}
\end{aligned}
\tag{5}
$$

Further analysis, similar that in Fararo (1972), decides if such an equilibrium point is stable – that is, if an actor perturbed from that point returns to it. For these equations, a necessary and sufficient condition for stability is that the eigenvalues of the system matrix A have negative real parts. The system matrix is:

$$
\mathrm{A} = \begin{bmatrix} -(b_1+z_1) & b_2 \\ b_1 & -(b_2+z_2) \end{bmatrix}
$$

The eigenvalues are the solution to the equation:

$$
\det[A-\lambda I)] = 0
$$

or

$$
\lambda^2 + [(b_1+z_1)+(b_2+z_2)]\lambda + (b_1+z_1)(b_2+z_2) - b_1b_2 = 0
$$

Solving yields

$$
\lambda = \frac{-(b_1+b_2+z_1+z_2) \pm \sqrt{(b_1+b_2+z_1+z_2)^2 - 4((b_1+z_1)(b_2+z_2)-b_1b_2)}}{2} < 0
$$

which in all cases is negative. Therefore the equilibrium is stable for all parameter values.

Table 3: *Fates of the Theoretician and the Experimentalist in Four Scientific Fields**

	Theoretician		Experimentalist	
Type of Field	**Empirical status** s_{1e}	**Theoretical status** s_{2e}	**Empirical status** s_{1e}	**Theoretical status** s_{2e}
Old established theoretical field (OET)	7.0	9.9	5.7	9.4
Newly developing theoretical field (NDT)	4.6	5.9	3.5	6.9
Old established empirical field (OEE)	9.4	5.7	9.9	7.0
Newly developing empirical field (NDE)	6.9	3.5	5.9	4.6

*b = .1 in all fields.

4.2. Comparative Status Outcomes: First Analysis

Using these general results, and the values from Table 2 we obtain the equilibrium and stability results for the two actor prototypes, theoretician and experimentalist (a term meant to suggest a specialist in empirical work), in four distinct types of fields, as shown in Table 3.

The following aspects of the generated outcomes in Table 3 should be noted. Given a starting position of (1, 1) in each case, both types of scientific actors are upwardly mobile in each of the four fields. In summarizing additional generated outcomes recorded in Table 3 we sometimes shall say that the stable equilibrium status is the attained status or use the term status attainment to mean a status in equilibrium. In these terms, we note that:

(1) The theoretician is the least upwardly mobile in the newly developing empirical field and the most in the old established theoretical field. The experimentalist is the exact opposite, least upwardly mobile in the newly developing theoretical field and most in the old established empirical field.

(2) The theoretician's attained *theoretical* status is almost identical in the newly developing theoretical field and the old established

empirical field and the experimentalist's attained *empirical status* is almost identical in the old established theoretical field and the newly developing empirical field.

(3) More abstractly, we note that the table shows an isomorphism between priority outcomes for theoreticians (with priority theoretical status) and experimentalists (with priority empirical status) under the mapping that interchanges T with E in each field designation. That is,

$$\begin{gathered} \text{OET} \rightarrow \text{OEE} \\ \text{NDT} \rightarrow \text{NDE} \\ \text{OEE} \rightarrow \text{OET} \\ \text{NDE} \rightarrow \text{NDT} \end{gathered}$$

For instance, in an OET field the attained theoretical status of the theoretician is 9.9 and we see that in OEE, the attained empirical status of the experimentalist is also 9.9. Interpreting this particular transform, scientific actors attain the highest level of their priority dimension of status in old established fields that provide more opportunities and rewards for research of the type that matches that priority, theoretical or experimental. Conversely, they attain their worst outcomes in newly developing fields that are mismatches to their priority or orientation, e.g., an actor whose priority is theory but who is embedded in a newly developing empirical field will attain a theoretical status of only 3.5, the lowest of the four generated levels.

We also note that in the old established theoretical field, the theoretician attains both higher theoretical and empirical status than the experimentalist and, in parallel via the isomorphism, the experimentalist attains both higher theoretical and experimental status than the theoretician in the old established empirical field.

One aspect of the generated outcomes appears paradoxical. Namely, according to Table 3, in the newly developing theoretical field, the theoretician attains higher *empirical* status than the experimentalist in that field and the experimentalist attains higher *theoretical* status than the theoretician in that field. A similar reversal of pattern holds for experimentalist versus theoretician in the newly developing empirical fields. To understand how such reversals come about the equilibrium equations can be rewritten to emphasize how they depend on actor orientations (and setting $b = b_1 = b_2$):

$$s_{1e} = \frac{b(a_1 + a_2) + z_1 z_2 K_{31} + b(z_1 K_{31} + z_2 K_{32}) + a_1 z_2}{z_1 z_2 + b}$$

$$s_{2e} = \frac{b(a_1 + a_2) + z_1 z_2 K_{32} + b(z_1 K_{31} + z_2 K_{32}) + a_2 z_1}{z_1 z_2 + b}$$

Written this way shows that either status in any field is influenced by actor orientation through the third and fourth factors in the numerators. (In the general cases, the second factors are also relevant but not for the two ideal types under comparison.)

In a newly developing theoretical field with the parameters given in Table 2, the third factor is larger for the theoretician ($b(z_1K_{31} + z_2K_{32}) = .1(.25 \times 2.5 + .75 \times 5) = .4375$) than for the experimentalist ($b(z_1K_{31} + z_2K_{32}) = .1(.75 \times 2.5 + .25 \times 5) = .3125$), but the fourth factor is larger for the experimentalist ($a_2z_1 = .8 \times .75 = .6$) than for the theoretician ($a_2z_1 = .8 \times .25 = .2$). The difference in the fourth factor outweighs the difference in the third factor so the experimentalist has higher theoretical status at equilibrium than the theoretician, oddly enough, because of the experimentalist's greater sensitivity to the natural mobilizer effect on the theoretical status dimension. The theoretician's emphasis on the more valued field dimension benefits his or her equilibrium theoretical status relative to the emphasis placed on this dimension by the experimentalist, but not enough to offset the experimentalist's advantage through greater sensitivity to the natural mobilizer on the more valued field dimension.

It should be noted in this context that the theoretician's disadvantage only comes late in the career. Based on numerical solutions of the dynamical system (1), Figure 1 traces out the trajectories of the two ideal types of scientists in a newly developing theoretical field assuming the origin as the starting point. The theoretician's theoretical status dominates the experimentalist's theoretical status until the trajectories approach the respective equilibrium points at which time they cross and the experimentalist from then on has greater theoretical status in the field while the theoretician has greater empirical status.

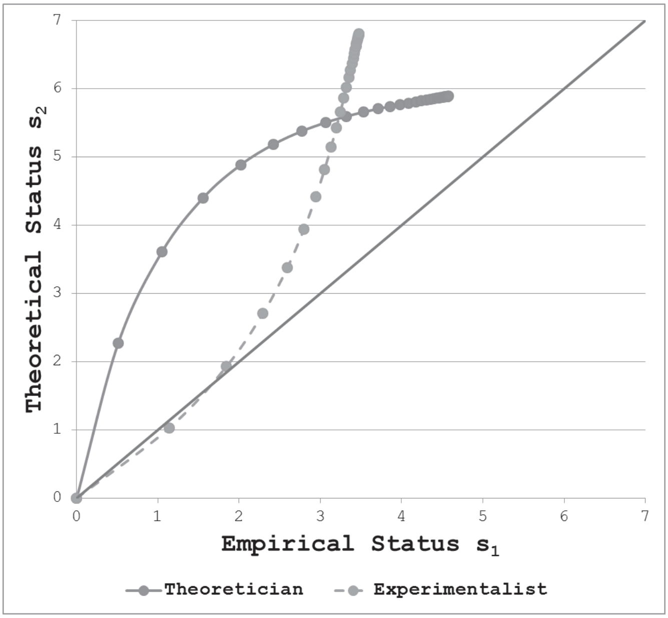


Figure 1: *Career trajectories in a newly developing theoretical field*

For theoreticians, the large natural mobilizer effect on the theoretical status dimension impacts their careers early on but at later stages, gains in theoretical status are dampened by the greater emphasis paid to field expectations for theoretical status. For experimentalists, the lack of emphasis to the theoretical dimension early on results in smaller gains in theoretical status, but at later stages, the gains in theoretical status are enhanced via its natural mobilizer because less emphasis is placed on field expectations for theoretical status.

4.3. Comparative Status Outcomes: Further Analysis

A global summary of how equilibrium statuses vary as a function of actor orientation or priority in the four different fields is given in Figure 2. The figure makes it clear the conditions under which theoretical status exceeds empirical status (or vice versa) at equilibrium and how the magnitude of the difference depends on the scientific actor's orientation. The x-axis represents the actor's orientation in terms of responsiveness to the expectations or standards of the field in which that actor is embedded

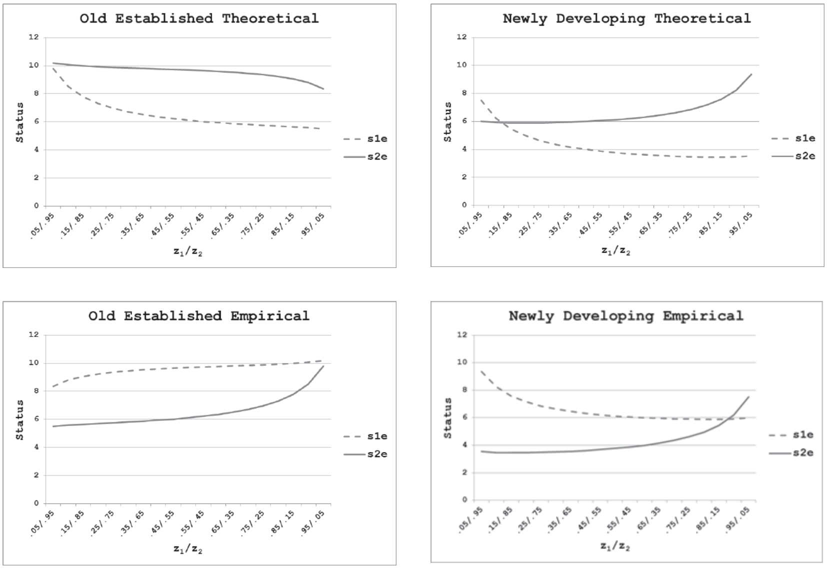


Figure 2: *Equilibrium statuses in four scientific fields by scientific actor orientation*

and the y-axis shows the attained pair of components of status, empirical and theoretical.

We draw attention to the following outcomes, proceeding from the upper left figure clockwise.

In an old established theoretical field, actors who are more empirical in orientation attain lower status than those who are more theoretical in orientation. This outcome is entirely plausible.

In newly developing theoretical fields, actors who are more empirical similarly attain lower empirical status but, and this may seem paradoxical, they attain higher theoretical status than their less empirical colleagues. How can we interpret this result? Let us think of a newly developing field of theoretical physics as an example. What is valued more: a contribution that is a more elegant mathematical formulation of a new theoretical model or a contribution that is responsive to the need for empirical support of the key idea underlying the model? Framing the issue this way does make this outcome appear more plausible than may strike the reader at first glance, albeit it remains a tentative interpretation.

In a newly developing empirical field, according to model, the more empirical the scientist's orientation, the lower the attained empirical status and the higher the attained theoretical status. Again, this seems paradoxical. While becoming more empirically oriented in such a field hardly would merit added recognition, why would it imply higher theoretical status? One way to think of this is to imagine a person entering the field as a pure theorist relatively unconcerned about the field's expectations for empirical relevance and gradually becoming more and more empirical: in that case, the theoretical work would more and more meet with social approval, i.e., greater recognition or higher theoretical status. Again, this is a merely provisional interpretation.

In an old established empirical field, with increasing empirical orientation, status attainment increases in both dimensions. The interpretation just given for theoretical status holds here as well, and in this case, the rise in empirical status is not problematic in terms of interpretation, including the declining slope of the rise as the empirical orientation increases.

Figure 3 shows these outcomes in a comparative mode. As seen in the left panel, theoretical status is a very different function of actor orientation in an old established theoretical field as compared with the other fields. It is the only type of field in which additional empirical orientation does not enhance theoretical status. Put another way, it is the only type of field in which theoretical status increases with increases in theoretical orientation. In the right panel, we see that empirical status

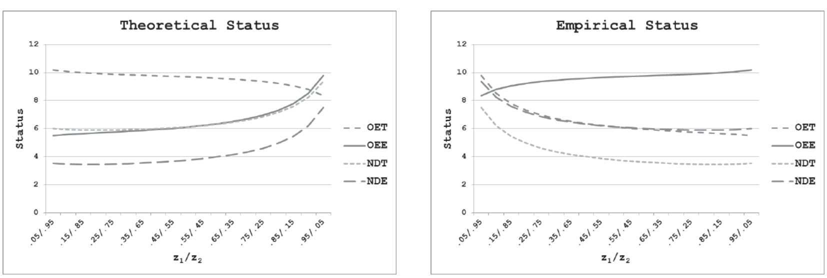


Figure 3: *Theoretical and Empirical Status by Actor Orientation in Four Scientific Fields**

*OET = Old established theoretical, OEE = Old established empirical, NDT = Newly developing theoretical, NDE = Newly developing empirical.

mirrors this pattern: very different functional form in an old established empirical field as compared with the other fields. Namely, it is the only type of field in which empirical status increases with increases in empirical orientation.

5. STATUS INCONSISTENCY

The mechanisms for status dynamics provide a way to characterize the amount of status inconsistency an actor faces in a given position. This inconsistency is a pressure to equilibrate, depending upon responsiveness parameters. Thus, a measure of status inconsistency will be derived using the dynamical model. It will then be traced out as a function of time for the theoretician and the experimentalist within various situations. The objective is to show how these actors, equilibrating as they do according to the equations, are "managing" the inconsistency problem.

The intuitive idea is that the distance between the current position and the equilibrium point along the path determined by the two responsiveness parameters is the amount of inconsistency, since this distance is along the path the actor would travel if equilibration of these two statuses were the only concern. Suppose that the actor is at position (s_1, s_2). Then the equations (3), with $k = 1$, express responsiveness to the disequilibration of the two components of the position. In a small time interval dt, the induced movement is,

$$ds_1 = -b_1(s_1 - s_2)dt$$
$$ds_2 = b_2(s_1 - s_2)dt$$

which can be thought of as a vector (ds_1, ds_2). It follows that the slope of the straight line from the current position to the consistency position (s^*, s^*) is given by the ratio $ds_1/ds_2 = -b_2/b_1$. Because (s_1, s_2), the current position, lies on this straight line, any other point (x, y) on it satisfies the condition,

$$\frac{(y - s_2)}{(x - s_1)} = -\frac{b_2}{b_1}$$

And therefore, letting x = s^* and y = s^* we have:

$$s^* = \frac{(Bs_1 + s_2)}{(1+B)} \quad \text{where } B = \frac{b_2}{b_1}$$

Let h denote the distance from the current position (s_1, s_2) to (s^*, s^*). Then this distance satisfies,

$$h^2 = (s_1 - s^*)^2 + (s_2 - s^*)^2$$

Thus, solving for h which we now call the *status inconsistency* (at a given time in terms of the current position) is given by the absolute value of the difference of the current statuses $|s_1 - s_2|$ multiplied by a coefficient that is a function of the B term:

$$h = \frac{\sqrt{(1+B^2)}}{(1+B)}|s_1 - s_2| \tag{5}$$

Although status inconsistency, thus defined, is a function of time, when the actor is in a stable equilibrium position it too achieves a stable value.

Also, notice that whenever $s_1 = s_2$ the h measure is zero, as intuitively required. However, this is not necessarily a stable value from the point of view of the status dynamics since the other mechanisms come into play when we combine them into a complete dynamical status analysis.

In Table 2 it was assumed that $b_1 = b_2 = b$. With this assumption applied in the current context, we see that B = 1 and expression (5) yields the very simple expression:

$$h = .7071|s_1 - s_2|$$

If we now apply this simplified expression for h to the situations of the theoretician and the experimentalist characterized as in Table 2, we can compute status inconsistency as a time-function as the actor's path in status space is generated by the equations (1).

For the theoretician, ($z_1 = z_2$) = (.25, .75), the asymptotic values for the four types of fields turn out to be:

$$h(\text{New Theoretical}) = 0.9$$
$$h(\text{Old Theoretical}) = 2.1$$
$$h(\text{New Empirical}) = 2.4$$
$$h(\text{Old Empirical}) = 2.6$$

For the experimentalist, ($z_1 = z_2$) = (.75, .25), the values are:

$$h(\text{New Empirical}) = 0.9$$
$$h(\text{Old Empirical}) = 2.1$$
$$h(\text{New Theoretical}) = 2.4$$
$$h(\text{Old Theoretical}) = 2.6$$

In all fields both types of scientific actors experience increasing inconsistency early in their careers. However, the inconsistency of the theoretician in an empirical field of either type (or the experimentalist in a theoretical field of either type) starts to decline in mid-career but overshoots the balance point and then increases monotonically to equilibrium. In either type of theoretical field the inconsistency of the theoretician starts to decline in mid-career and continues to approach the balance point getting as close as it can at equilibrium. The same pattern holds for an experimentalist in either empirical field. Figure 1 demonstrates the path differences in a newly developing theoretical field as both types of scientific actors, starting at the origin, move away from the 45° line (the theoretician further away than the experimentalist), then the experimentalist moves back to the 45° line, crossing it and continues to move away from it to that actor type's equilibrium point. The theoretician, on the other hand, continues to experience increasing inconsistency until a turn is made towards the 45° line and then inconsistency declines as that actor's equilibrium point is approached. These analytical findings seem to match what one would predict intuitively. A further type of analysis would be to consider feedback to parameter change to escape, insofar as possible, from the conditions producing such discomfort.

More generally, no matter the type of scientific field, both types of scientific actors must live with a certain amount of status inconsistency although the inconsistency is smallest in the newly developing type of field they favour. This is true despite the fact that among other things they would like to reduce the inconsistency to zero. The point is that there are other things: actors are ambitious, they are attuned to field expectations, but they are more strongly oriented to one kind of contribution to science than to the other.

CONCLUDING REMARKS

The above work is illustrative of the way in which the abstract methods of status dynamics, as set out in earlier work, can be applied to create theoretical models in specific substantive domains. The domain chosen here is the sociology of science with particular reference to the earlier phase of development of that field in which a great deal of work dealt with recognition and so with scientific status. Our basic decision was to propose a two-dimensional representation of status in science corresponding to the two main types of valuations of scientific work, empirical and theoretical. We called these empirical status and theoretical status, respectively, and made reference to earlier work on a measurement model—including an empirical application of it—as a basis for the valuation components underlying the two dimensions of status. Then we set out the dynamic status model and defined four types of fields in terms of parameters in the model as well as two types of scientific actors, theoreticians who give priority to theoretical standards of valuable scientific work and experimentalists who give priority to empirical standards of valuable scientific work. We derived equilibrium outcome expressions and used them to illustrate how the model generates outcomes. We also used the model to derive a measure of status inconsistency and then derived how it varied for theoreticians and experimentalists in the four types of scientific fields.

The applications are illustrative of theoretical models constructed within a mathematical framework of the dynamical system type. The nearest social science analogy to this kind of work is the field of economic dynamics. Anyone familiar with Samuelson (1965) or Baumol

(1959) will recognize that the dynamics studied in these books is part of theoretical economics and somewhat different from the methodology of econometrics, which in turn parallels the data-analysis models currently utilized in sociology.

To be sure, the particular assumptions in setting up the dynamic model shown in equation (1) were chosen among alternative formulations and the latter deserve study in their own right. For example, one might suggest an alternative formulation of what we have called the natural mobilizer. It is analogous to ideas such as the Matthew Effect and cumulative advantage proposed by Merton (1968; 1988; 1995) and this might suggest an alternative mathematical representation of this mechanism. Similarly, some aspects of the model were chosen simply to keep the model fairly simple in structure while still enabling us to derive and conduct both the equilibrium and the status inconsistency analyses. Thus, as always in constructing models, there is more to be done in future studies.

We are aware of at least two types of criticism that apply to this type of model building or, at least, the way in which we have employed it. The first and most penetrating critique that can be made of this type of model is that there are actors but no actions. That is, the underlying mechanisms, while plausible and in combination yield some interesting results, do not represent and explain the choices that scientists make in regard to research and how such choices in turn do or do not yield concrete results in publications that form the basis for the valuations that imply changes in status. Nevertheless, we can divert the force of this criticism by viewing such choices as exogenous to the status system and arguing that our analysis appropriately models the status trajectory possibilities if it were the case that an individual scientist produced activity on a regular basis. Quite possibly any particular scientist could get stuck at a point on the trajectory simply because the production of activity, which is valued and mapped to the status space, shuts down for reasons worth modelling, no doubt, but exogenous to the status consequences.

A second such criticism pertains to structuralism. The present model has been generative but not structural. A model of the latter type would start with a collection of actors embedded in a common situation of science such as a newly arising field. It would then generate, through their acts (of creative work, for instance) and through their interactions (particular evaluations, for instance) the dynamics of contributions to science and of the allocation of recognition for such contributions. This type of generative model would exhibit what we have called *generative structuralism* (Fararo and Skvoretz: 2002). Such a model-building strategy has been used by us to link dynamics and action by combining insights and methods from social network analysis and from certain developments in contemporary sociological theory (Fararo and Skvoretz, 1986; Skvoretz and Fararo, 1996).

In our opinion, a generative structuralist approach merits its own application to the substantive problem analysed in this paper. But our classical dynamical system approach is equally valuable. Both are worthwhile efforts in a field that needs and should support a variety of modes of theoretical analysis. Theory development is itself an experimental adventure. We have described one particular episode of theoretical model building in what is necessarily, as science, a collective evolutionary process involving variation in approaches with selection based upon common value standards that are both theoretical and empirical.

REFERENCES

Barber, B. and Hirsch, W. (eds) (1962) *The Sociology of Science*. New York: The Free Press.

Baumol, W.J. (1959) *Economic Dynamics*. Second Edition. New York: Macmillan.

Cherkaoui, Mohamed (2005) *Invisible Codes: Essays on Generative Mechanisms*. Oxford: The Bardwell Press.

Fararo, T.J. (1970a) "Status dynamics", in E. Borgatta and G. Bohrnstedt (eds), *Sociological Methodology*. San Francisco: Jossey-Bass.

——— (1970b) "Theoretical Studies in Status and Stratification," *General Systems*, Vol. XV: 71–101.

——— (1972) "Dynamics of status equilibration", in J. Berger, M. Zelditch, Jr. and B. Anderson (eds), *Sociological Theories in Progress*, vol. 2. Boston: Houghton-Mifflin.

——— (1973) *Mathematical Sociology*. New York: Wiley.

Fararo, T.J. and Skvoretz, J. (1986) "E-state structuralism: A theoretical method", *American Sociological Review*, 51(5): 591–602.

——— (2002) "Theoretical integration and generative structuralism," in J. Berger and M. Zelditch, Jr. (eds), *New Directions in Contemporary Sociological Theory*. Lanham, MD: Rowman & Littlefield, chapter 11.

Glaser, B.G. (1964) *Organizational Scientists: Their Professional Careers*. Indianapolis: Bobbs-Merrill.

Hagstrom, W. (1965) *The Scientific Community*. New York: Basic Books.

Luce, R.D. (1959) *Individual Choice Behavior*. New York: Wiley.

Merton, R.K. (1957) "Priorities in scientific discovery: A chapter in the sociology of science", *American Sociological Review*, 22: 635–659.

——— (1968) "The Matthew effect in science", *Science* 159(3810): 56–63.

——— (1988) "Cumulative advantage and the symbolism of intellectual property", *ISIS* 79: 606–623.

——— (1995) "The Thomas theorem and the Matthew effect", *Social Forces*, 74(2): 379–422.

Samuelson, P.A. (1947) *Foundations of Economic Analysis*. Cambridge: Harvard University Press.

Skvoretz, J. and Fararo, T.J. (1996) "Status and participation in task groups: A dynamic network model," A*merican Journal of Sociology*, 101: 1366–1414.

Skvoretz, J., Windell, P. and Fararo, T.J. (1974) "Luce's axiom and occupational prestige: Test of a measurement model", *Journal of Mathematical Sociology* 3: 147–162.

Storer, N.W. (1966) *The Social System of Science*. New York: Holt, Rinehart and Winston.

25

SOCIAL RECOGNITION AND SUCCESS IN THE CONTEMPORARY VISUAL ARTS

A Sociological Perspective on Rankings of the "Top 100 Artists in the World" and the Uneven Distribution of Success among Nations

Alain Quemin
Université Paris-8 / Institut d'Etudes Européennes

What can a sociological view bring to the analysis of social recognition and success in today's contemporary art world? As soon as a reflection on art emerged as a specific discipline, authors tried to discern the most talented artists. As can be illustrated by the famous case of Giorgio Vasari and his much-touted *The Lives of the Most Excellent Painters, Sculptors, and Architects, from Cimabue to Our Times (Le Vite de' più eccellenti pittori, scultori, e architettori da Cimabue insino a' tempi nostri*, as it was originally known in Italian), first published in Florence in 1550 (Vasari, 1550) and republished and enlarged in 1568, generally considered the first important book in art history, the selection of artists was made on the criterion of excellence that included numerous components. Later in the history of writings on art, the same report can be made for Roger de Piles and his treaty called *Cours de Peinture par Principes composé par Mr. de Piles* (Roger de Piles, 1708) in which the author marked artists (out of 20) on four criteria—composition, drawing, colours and expressivity—to evaluate the aesthetic value of works of art. However, although a ranking of all artists could have been easily produced by summing up the four marks (the first place would be shared by Raffaello and Rubens if the same coefficient was attributed to each of the four domains), it seems that the idea never came to Roger de Piles' mind as if producing *rankings* to evaluate lists of artists, even when using quantitative instruments, made no sense at that time. The same can be said again for the numerous authors who contributed to the foundation of art history as a specific discipline in the 18th and 19th centuries. During all that—very long—phase, although it was already important and even crucial for commentators to be able to evaluate the work of artists in order to identify the most important of them, and even if some of them like Roger de Piles adopted a quantified approach, there was no *ranking* or attempt of any kind to "hierarchize" the artists although discerning more talented ones among them was already a constant concern.

Things changed radically with the apparition of contemporary art. It is here necessary to first define the expression before studying the implication of this new form of art—what Nathalie Heinich (Heinich, 1998) calls a paradigm.

Although art historians tend to consider that contemporary art emerged as early as after the Second World War, in 1945, museum professionals, among which curators, more often consider that it really began at the very end of the 1960s or very beginning of the 1970s with the historical and seminal exhibition "When Attitudes become Form" organized by the curator who was to become the most important of them, Harald Szeemann, at the Bern Kunsthalle, in Switzerland in 1969. This exhibition totally changed the perspective on art and gave birth to a profoundly renewed standpoint on art creation. Since then, creativity and experimentation—Nathalie Heinich insists on the notion of transgression, as pushing the limits of what is socially acceptable becomes a major component of the attitude adopted by artists to be recognized and accepted as proper contemporary creators—have been major components of what is expected from present art and artists. For Heinich, whereas "classic" or "academic" art was ruled by the "regime of community"—in which what was most valued was a conformity to certain codes, to the norms or canons of representation, far from the impetus of creativity –, in the case of modern art that emerged in the 19th Century as a new paradigm, the aim of art became to represent the inner world of the artist, his or her subjectivity. With a third paradigm, that of contemporary art, the major concern was deeply redefined. It moved to playing with the frontiers of art and non-art, along with transgression—a specific kind of innovation—that now plays a major role in the affirmation of oneself as a contemporary artist (Heinich, 1998 and 2000). As we have underlined in previous works, expert judgment in contemporary art strongly favours innovation, creation (Moulin & Quemin, 1993).[1]

For our purpose here, it is important to underline that the change in norms and social values that underlie contemporary art as a new paradigm—to use Heinich's terminology—is simultaneous to the appearance and immediate triumph of *lists organized on a hierarchical basis*—or rankings—in the contemporary art world that strive to objectivize the positions of the "best" artists. Although, as we have previously stated, it can be argued that contemporary art really only emerged in 1969, as early as … 1970, the first ranking was created and published by economic journalist Willy Bongard in German magazine *Capital*. From 1970 to 2008, this indicator called Kunstkompass—the compass of art—was to be published nearly annually by the same magazine, unveiling to readers the *ranked* list of the 100 top artists (or "best artists") in the world. Although Willy Bongard died in 1985, his widow, Linde Rohr-Bongard continued publishing the results of the Kunstkompass year after year, which illustrates the strong social demand for such an indicator, although, as we will see, it can be criticized for its obvious biases and it often was. Moreover, when the collaboration between the Kunstkompass authors and *Capital* ended in 2008 and the annual editions of the Kunstkompass were then published in another German economics magazine *Manager Magazin*, the editors of *Capital* developed another partnership with a different team, a firm called Artfacts, in order to publish another—competing—annual ranking of the 100 top most visible or successful artists, now called "Capital Kunstmarkt-Kompass", showing once again the strong social demand for such indicators.

One fact should be stressed: from 1970, with the emergence of contemporary art and the constitution of a contemporary art world (Becker, 1982), not only did analysts and thinkers dealing with artistic creation—and more precisely artistic creation of their time—try to or even probably feel the need to better identify the "best" artists, as had then been the case for centuries and even since the apparition of art history, but, from that time they also regularly needed to *rank* them, which was an addition of tremendous importance. As uncertainty on art value—both aesthetic and financial—is a major characteristic of contemporary art (Moulin, 1992, Moulin & Quemin, 1993), producing rankings of the best artists constituted and still constitutes an attempt to try and reduce the uncertainty associated with contemporary art and artists. In this contribution, we will first present the two main rankings of contemporary artists and we will then show how they tend to reveal a very uneven distribution of artistic success (Bowness, 1989) among the different countries in the world. The positions of artists in the rankings will show very marked asymmetric distributions or concentration effects when nationalities are considered, with a very limited number of countries concentrating most positions. This is a more general characteristic of the distribution of all sorts of social resources such as income, wealth or quotations that generally show asymmetric effects and inequalities, with the existence of well known mechanisms of cumulative advantages and disadvantages (Merton, 1988). In his most recent book, studying the respective production of Moroccan academics and that of non-academics authors, Mohamed Cherkaoui shows similar concentration effects (Cherkaoui, 2011). Based on the previous analyses, our own study will show these effects when reputation, prestige or success (Bowness, 1989) is concerned for visual artists.

THE KUNSTKOMPASS AND THE "CAPITAL KUNSTMARTKT KOMPASS" BASED ON THE ARTFACTS DATA: A BRIEF PRESENTATION OF THE INDICATORS AND OF THEIR METHODOLOGIES

In all types of rankings, the results depend directly on the methodology that is used. It is therefore necessary to briefly present the method used by the two major rankings that aim to draw the list of the top

100 visual artists in the world every year. Since its creation in 1970, the Kunstkompass has been based on a system of points: the latter are allocated to different forms of artists' visibility. Although the system has evolved over time (and is not perfectly transparent as it is published some years only and, although one is generally supposed to be able to ask for the methodology, our demands have sometimes been ignored), it can be summarized schematically as follows: artists get points on three major occasions:

— Solo-exhibitions in museums or contemporary art centers. The more prestigious the institution is, the higher the number of points will be. For instance, a solo show at MoMA in New York City, at Tate Modern in London or at Centre Georges Pompidou in Paris will bring a very high number of points, whereas other solo shows in other less important but significant institutions will bring some points, but fewer than the previous institutions would.
— Participation to collective exhibitions such as biennials or in collective shows in museums or contemporary art centers. Once again, the more prestigious the institution is, the higher the number of points will be (for instance, participation to the most prestigious events such as Venice's biennale in Italy, or the Kassel Documenta in Germany, will bring a very high number of points, whereas other significant biennials organized in other cities will also be considered as qualifying, but will bring less points than the former ones). As a solo show gives more visibility to artists and plays an even greater part in their consecration process, the most important solo shows weigh more than participation to the most prestigious collective exhibitions.
— Reviews in the most influential contemporary art magazines such as *Flash Art*, *Art in America* and *Art Forum*.

A certain number of points is allocated to each of the previous occasions of visibility and, at the end of the year, they are all summed up, which then enables the persons who are in charge of the Kunstkompass to publish their annual ranking of the top 100 contemporary (living) artists in the world.

It is important to mention here that since, nearly as early as the Kunstkompass was created in 1970, it has been criticized for presenting a strong bias mostly in favour of Germany (by over-representing German institutions among qualifying ones and by attributing them coefficients that can often be considered too heavy compared to their real weight or influence in the international contemporary art world), and to a lesser extent, to neighbouring countries that belong to its cultural zone of influence (such as Austria). Still, it has existed for more than 40 years now and its general methodology has fundamentally remained the same, with only minor improvements.

What is the methodology used by Artfacts? Unlike the team that elaborates the Kunstkompass, Artfacts uses a very wide number of qualifying institutions: private contemporary art galleries, public institutions (with or without a collection of their own, that is to say museums and contemporary art centres), biennials and triennials, other spaces of temporary exhibition, contemporary art fairs, auctions, art hotels, art reviews, journals and magazines, art books, art schools, festivals, nonprofit organizations, or even art management institutions or private collections. As can be seen from this list, the whole ensemble is particularly vast. Although it cannot be totally exhaustive, the extremely wide collect of information limits certain risks of biases.

Whereas some instances are crucial in the consecration process, others seem more secondary or even marginal. It is therefore important that the coefficients attributed to each of the different instances reflect that. To that intent, Artfacts has created an algorithm that determines the weight of each instance relative to the fame of the artists who are associated with it. Fundamentally, "network points" are allocated (all artists that are collected by museums and represented by galleries get such points that are then conferred to the institutions that collect or represent the artists, these "network points" reflecting the reputation of the institution that is concerned). For each of his or her exhibitions in a museum or gallery, an artist gets points. Although, from a logical point of view, it may seem surprising that artists and institutions mutually influence each other's weight and the position of artists in the ranking, sociological analysis has shown that in the world of contemporary art, artists and galleries (and also gallery owners), but also artists and institutions, mutually influence each other's reputations (Moulin, 1992, Moulin and Quemin, 1993). It can be said that this is precisely one of the major interests of the method that has been elaborated by Artfacts to try and take into account and reflect that peculiarity of the world of contemporary art. Unlike other methodologies such as the one adopted to elaborate the Kunstkompass, in which the important part of subjectivity in determining coefficients generates very significant biases (as we mentioned earlier, the overrepresentation of German institutions and their excessive weight exert a strong influence on the excellent—and probably excessive—result of German artists), the coefficients in the case of Artfacts are not set once and for all, only occasionally reconsidered as it is actually the case with the Kunstkompass; they are constantly actualized (every week) by the algorithm, taking into account the certifying power of the institutions as it can be appreciated by the reputation of the artists with which they are then associated. Besides, the width of the database is an essential dimension, with 70.263 artists in the world in June 2012.

Being a private firm, Artfacts does not publish or even communicate on demand the construction mode of its algorithm[2] that is protected by industrial secrecy. Although this fact is frustrating for the social scientist who would like to be able to judge the rigorousness of the methodology that is used, an indirect reconstitution of some of the coefficients could be done and it was found to be very satisfactory and pertinent.

Although the main ranking is established on the base of the number of points that have been accumulated since the indicator was created in 1999, the ranking is not that different from the one that one would get by considering only the number of points accumulated during the last twelve months as … success generally begets success.

RANKINGS AND THE UNEQUAL SUCCESS OF ARTISTS AMONG NATIONS

As we mentioned before, for this contribution we decided to focus on the nationalities of artists, as both rankings mention them and as it seemed pertinent to us to explore the possibility of an existing phenomenon of uneven concentration (Merton, 1988, Cherkaoui, 2011) on the surface of the globe in terms of artistic success or consecration, the ultimate form of it (Quemin, 2006 and 2013). But to exemplify one of the two rankings, the Kunstkompass also gives for each artist other significant indications such as their age or year of birth, the main type of practice that they have (such as painting, sculpture, installation, video, photography) or the name of their main gallery among other social characteristics, that can be analysed sociologically and that can tell a considerable amount about the traits or networks that can favour artistic success.[3] Both Kunstkompass and Artfacts rankings also mention the number of points obtained by each artist that determines their position in the ranking. In order to make the presentation of the tables more simple, we did not reproduce that piece of information here, but we will analyse what we can learn from it later in this text, when summing up the number of points granted to each country in each of the rankings and when calculating percentages.

Both in the case of the Kunstkompass and of the Artfacts ranking, we decided to reproduce the information on nationality as it appears in the lists that are published, even if there can very punctually exist some mistakes concerning the factor of nationality on which we are going to focus now to illustrate its link to artistic reputation and consecration. It may be necessary here to mention that some artists—but, as a matter of fact, very few of them, even at the most international level at which it could be expected such a trait would be favoured—have two different nationalities.

The Kunstkompass Ranking (2011)

Rank	Name & First Name	Nationality
K1	Richter Gerhard	D
K2	Nauman Bruce	USA
K3	Baselitz Georg	D
K4	Sherman Cindy	USA
K5	Kiefer Anselm	D
K6	Trockel Rosemarie	D
K7	Serra Richard	USA

Rank	Name & First Name	Nationality
K8	Eliasson Olafur	DK
K9	Kelley Mike	USA
K10	Kentridge William	ZA
K11	Gursky Andreas	D
K12	West Franz	AT
K13	Twombly Cy	USA
K14	Koons Jeff	USA
K15	Baldessari John	USA
K16	Boltanski Christian	F
K17	Rist Pipilotti	CH
K18	Ruff Thomas	D
K19	Johns Jasper	USA
K20	Christo & Jeanne-Claude	USA
K21	Oldenburg Claes	USA
K22	Barney Matthew	USA
K23	Viola Bill	USA
K24	Schütte Thomas	D
K25	Hirst Damien	UK
K26	Cattelan Maurizio	IT
K27	Knoebel Imi	D
K28	Struth Thomas	D
K29	Fischli & Weiss	CH
K30	Holzer Jenny	USA
K31	Gilbert & George	UK
K32	Gordon Douglas	UK
K33	Demand Thomas	D
K34	McCarthy Paul	USA
K35	Alÿs Francis	BE
K36	Ruscha Ed	USA
K37	Wall Jeff	CDN
K38	Kabakov Ilya & Emilia	RUS
K39	Förg Günther	D
K40	Weiner Lawrence	USA
K41	Neshat Shirin	IR
K42	Graham Dan	USA
K43	Hatoum Mona	UK
K44	Rainer Arnulf	AT
K45	Orozco Gabriel	MEX

Rank	Name & First Name	Nationality
K46	Höller Carsten	D
K47	Bonvincini Monica	IT
K48	Rehberger Tobias	D
K49	Dean Tacita	UK
K50	Calle Sophie	F
K51	Prince Richard	USA
K52	Tuymans Luc	BE
K53	Huyghe Pierre	F
K54	Buren Daniel	F
K55	Dumas Marlene	NL
K56	Genzken Isa	D
K57	Uecker Günther	D
K58	Becher Bernd & Hilla	D
K59	Rauch Neo	D
K60	Lüpertz Markus	D
K61	Pettibon Raymond	USA
K62	Meese Jonathan	D
K63	Horn Rebecca	D
K64	Abramovic Marina	SRB
K65	Walker Kara	USA
K66	Whiteread Rachel	UK
K67	Stella Frank	USA
K68	Kelly Ellsworth	USA
K69	Kounellis Yannis	GR
K70	Gillick Liam	UK
K71	Penk AR	D
K72	Kapoor Anish	IND
K73	Graham Rodney	CA
K74	Hirschhorn Thomas	CH
K75	Tillmans Wolgang	D
K76	Cragg Tony	GB
K77	Schneider Gregor	D
K78	Gober Robert	USA
K79	Feldmann Hans-Peter	D
K80	Tiravanija Rirkrit	THA
K81	Kirkeby Per	DK
K82	Hockney David	UK
K83	Fritsch Katharina	D

Rank	Name & First Name	Nationality
K84	Long Richard	UK
K85	Horn Roni	USA
K86	Perjovschi Dan	RO
K87	Wurm Erwin	AT
K88	Bock John	D
K89	Doig Peter	UK
K90	Signer Roman	CH
K91	Hamilton Richard	UK
K92	Sugimoto Hirochi	JP
K93	Smith Kiki	USA
K94	Rosler Martha	USA
K95	Oursler Tony	USA
K96	Spoerri Daniel	CH
K97	Lawler Louise	USA
K98	Ackermann Franz	D
K99	Dijkstra Rineke	NL
K100	Farocki Harun	CZ

Artfacts Ranking (June 2012)

Rank	Name & First Name	Nationality
A1	Nauman Bruce	USA
A2	Richter Gerhard	D
A3	Sherman Cindy	USA
A4	Ruscha Ed	USA
A5	Baldessari John	USA
A6	Baselitz Georg	D
A7	Weiner Lawrence	USA
A8	Ruff Thomas	D
A9	Kentridge William	ZA
A10	Eliasson Olafur	DK
A11	Johns Jasper	USA
A12	Fischli & Weiss	CH
A13	Graham Dan	USA
A14	Gordon Douglas	UK
A15	West Franz	AT
A16	McCarthy Paul	USA

Rank	Name & First Name	Nationality
A17	Gursky Andreas	D
A18	Trockel Rosemarie	D
A19	Serra Richard	USA
A20	Alÿs Francis	BE
A21	Tillmans Wolfgang	D
A22	Rist Pipilotti	CH
A23	Hatoum Mona	LB
A24	Kiefer	Anselm
A25	Hirst Damien	UK
A26	Abramovic Marina	RS
A27	Oursler Tony	USA
A28	Struth	Thomas
A29	Oldenburg Claes	USA / SE
A30	Kelly Ellsworth	USA
A31	Rainer Arnulf	AT
A32	Viola Bill	USA
A33	Goldin Nan	USA
A34	Graham Rodney	CA
A35	Koons	Jeff
A36	Export Valie	AT
A37	Wurm Erwin	AT
A38	Boltanski Christian	F
A39	Andre Carl	USA
A40	Acconci Vito	USA
A41	Holzer Jenny	USA
A42	Orozco Gabriel	MEX
A43	Wall Jeff	CA
A44	Smith Kiki	USA
A45	Förg Günther	D
A46	Stella Frank	USA
A47	Prince Richard	USA
A48	Pettibon Raymond	USA
A49	Cragg Tony	UK
A50	Cattelan Maurizio	IT
A51	Huyghe Pierre	F
A52	Hockney David	UK
A53	Sugimoto Hirochi	JP
A54	Kusama Yayoi	JP

Rank	Name & First Name	Nationality
A55	Marclay Christian	USA, CH
A56	Dean Tacita	UK
A57	Gillick Liam	UK
A58	Buren	Daniel
A59	Katz Alex	US
A60	Kabakov Ilya & Emilia	RU
A61	Long Richard	UK
A62	Becher Bernd & Hilla	D
A63	Monk Jonathan	UK
A64	Dine Jim	USA
A65	Ono Yoko	JP
A66	Neshat Shirin	IR
A67	Hirschhorn Thomas	CH
A68S	Schütte Thomas	D
A69	Barney Matthew	USA
A70	Muniz Vik	BR
A71	Armleder John M.	CH
A72	Tiravanija Rirkrit	TH
A73	Calle Sophie	F
A74	Tuymans Luc	BE
A75	Pistoletto Michelangelo	IT
A76	Sala Anri	AL
A77	Fleury Sylvie	CH
A78	Höfer Candida	D
A79	Dumas Marlène	NL, ZA
A80	Feldmann Hans Peter	D
A81	Demand Thomas	D
A82	Close Chuck	USA
A83	Walker Kara	USA
A84	Morellet François	F
A85	Kounellis Yannis	IT, GR
A86	Zobernig Heimo	AT
A87	Penck A.R	D
A88	Horn Roni	D
A89	Höller Carsten	BE
A90	Oehlen Albert	D
A91	Artschwager Richard	USA
A92	Knoebel Imi	D

Rank	Name & First Name	Nationality
A93	Rosler Martha	USA
A94	Dijkstra Rineke	NL
A95	Gober Robert	USA
A96	Morris Robert	USA
A97	Kawara On	JP
A98	Tuttle Richard	USA
A99	Moffatt Tracey	AU
A100	Kosuth Joseph	USA

Before commenting the topic of national belonging in respect to the artists in the main two rankings of the most famous or recognized artists, a few comments can be made concerning these rankings. Although most of the time (and by far), the two rankings mention the same piece of information concerning the nationalities of artists, in a few cases, they provide different ones (in this case, either the nationality is different or two are mentioned in one of the rankings while the other ranking considers only one).

Still, in spite of this and although the two rankings have about one fourth of artists that are different (but three quarters that are similar, a very high proportion if one considers that their methodologies in order to evaluate visibility vary considerably, which tends to show that, at such a high level of success or even consecration, the impact of methodology and its associated biases remains somewhat limited), the two indicators unveil extremely strong concentration (Merton, 1988, Cherkaoui, 2011) phenomena in terms of artistic success when one considers nationality, that is to say, in terms of success among the countries.

In its 2011 edition, the Kunstkompass welcomes no less than 27 German artists, which probably expresses an overrepresentation due to the bias—the overrepresentation of German institutions and their excessive weight in terms of coefficients used to qualify artists—mentioned earlier in this text. The number of German artists among the top 100 in the world is nearly as high as that of American artists (28) and much higher than that of British artists (12), Swiss ones (5) and French ones (4), followed by Austrians (3), then Italians, Dutch, Belgians, Danes and Canadians (2 artists each), 12 other countries being represented by one artist only. It is important here to mention that, as we will develop later, very often these artists who possess the nationality of a country that appears to be very "peripheral" to the contemporary art world have, in fact, lived for many years in the USA and have strengthened the vitality of the American art scene. If we now consider the percentage of points represented by each country in the Kunstkompass by summing up the number of points of all artists sharing the same nationality and dividing it by the sum of points of all artists in the ranking, the result is as follows: the USA (30.4%) and Germany (30.0%) come far ahead of all other countries, the United Kingdom occupying 3rd position with only 10.4%, but clearly setting in the distance Switzerland (4.5%) and France (3.9%). The concentration (Merton, 1988; Cherkaoui, 2011) of artistic success is extreme in only a very small number of countries that all pertain to the Western world, either the USA or a very limited group of Western European countries (even in this territory, only very few countries play a significant part in terms of their artists' presence on the highest segment of the international contemporary art scene). Only 5 countries hold a close to 80% concentration of the most successful or visible international artists, Germany and the USA seem to constitute a sort of duopoly on the international art scene far beyond all other nations.

It may be useful here to compare the two rankings, that of the Kunstkompass and that of Artfacts, which tend to produce similar results, especially at the top of the hierarchies with the same artists being ranked at the top of each list, even if the methodologies used to produce the two rankings are extremely different. This shows that, when it comes to the highest level of reputation and success, that of consecration, the impact of the methodology that is used remains very limited. It may be useful here to stress that even if the rankings are supposed to unveil a social fact, they also have a performative dimension and they illustrate the phenomenon of self-fulfilling prophecy (Merton, 1948). Besides, in the cases in which the artists represented in the two rankings are different, they often share similar social characteristics, among which nationality or national belonging.

Thus the data produced by Artfacts confirm and strengthen the tendency that was already revealed by the Kunstkompass data and offer an even better illustration of the positions occupied by the different nations on the international contemporary art scene as they are not affected by the pro-German bias that we have been forced to underline on several occasions in this chapter. According to the Artfacts data, if one considers the nationalities of artists, the United States comes far ahead of all other countries with no less than 35 artists, while Germany with "only" 17 artists occupies a very comfortable second position, but at a much more marked distance from the USA than what was suggested by the Kunstkompass. The 3rd position is occupied again by the United Kingdom (8 artists), then France, Switzerland and Austria with 5 artists each, Japan (4 artists), Belgium (3 artists), then Canada, the Netherlands and Italy (2 artists each), and, finally, 12 other countries that are represented by only one artist each.

Once again, calculating the share of each country in the total of the points for the top 100 artists of the Artfacts ranking synthesizes information about the number of artists per country and about their ranking in the hierarchy. The ranking is the following: the United States comes far ahead (37.1%), far before Germany (18.2%) that comfortably outdistances the United Kingdom (7.63%), then follow… Austria (5.0%) and Switzerland (4.9%) that reach a position slightly ahead of France (4.4%). Let us underline that, although Italy occupied strong positions on the international contemporary art scene in the 1970s, sustained by renewed vigour with the trans-avant-garde during the 1980s, its influence is very limited today with only 1.7% of the previous indicator. Considering the Artfacts data of the top 100 visual contemporary artists, countries of Western Europe and of North America concentrate no less than close to … 90% of the indicator (87.3%)!

Although, for about two decades the ideology of globalization, through the mixing of different cultures and the alleged erasure of national borders, has been very popular in the contemporary art world, and even if most of its actors love to believe that nationality, country or place of residence do not matter and that talent can emerge and be recognized as such anywhere in the world, our analysis tends to unveil a very different reality. The international contemporary art world remains very territorialized and hierarchized in terms of countries under forms that can be diverse for its different segments. For instance, although for several years Chinese artists have been extremely successful on the market—especially at auctions—challenging the eminently strong positions of British, German and especially American artists in this domain, when it comes to the presence in art institutions such as major museums and contemporary art centres or even biennials organized in Western countries, the presence of Chinese artists, although it is often much commented, remains very limited (Quemin, 2013d) and Chinese artists are still frequently absent from the lists of the top artists in the world [4]. In the field of artistic consecration, the certification power is still concentrated within the hands of a small number of institutions and players that are nearly all Westerners and that still elect Western artists much more than all others.

Although, as we have shown, it already appears extremely marked when considering the previous data, the phenomenon of concentration is even more extreme if one now considers the different *countries of residence* and not *nationalities,* as artists from the "periphery" of the international contemporary art world tend to migrate to the more central countries in order to get consecrated.

To study this, we decided to "correct" the data published by Artfacts, by no longer taking nationality into account, but rather considering country of residence and creation. As always, a certain part of approximation is inevitable as artists, especially when they are still supported by their country of origin, do not generally want to publicize the fact that they have moved to another country that generally seems more appropriate when consecrated as important creators. However, the results obtained are massive enough to be commented here and the possible inaccuracy that might exist cannot affect the general tendencies that emerge.

Reconsidering the Artfacts Ranking in terms of Country of Residence:

Rank	Name and First Name	Nationality	Country of Residence
1	Nauman Bruce	USA	USA
2	Richter Gerhard	D	D
3	Sherman Cindy	USA	USA
4	Ruscha Ed	USA	USA
5	Baldessari John	USA	USA

Rank	Name and First Name	Nationality	Country of Residence
6	Baselitz Georg	D	D
7	Weiner Lawrence	USA	USA
8	Ruff Thomas	D	D
9	Kentridge William	ZA	ZA
10	Eliasson Olafur	DK	DK
11	Johns Jasper	USA	USA
12	Fischli & Weiss	CH	CH
13	Graham Dan	USA	USA
14	Gordon Douglas	UK	UK
15	West Franz	AT	AT
16	McCarthy Paul	USA	USA
17	Gursky Andreas	D	D
18	Trockel Rosemarie	D	D
19	Serra Richard	USA	USA
20	Alÿs Francis	BE	BE
21	Tillmans Wolfgang	D	D
22	Rist Pipilotti	CH	CH
23	Hatoum Mona	LB	**UK**
24	Kiefer Anselm	D	**F**
25	Hirst Damien	UK	UK
26	Abramovic Marina	RS	**USA**
27	Oursler Tony	USA	USA
28	Struth Thomas	D	D
29	Oldenburg Claes	USA / SE	**USA**
30	Kelly Ellsworth	USA	USA
31	Rainer Arnulf	AT	AT
32	Viola Bill	USA	USA
33	Goldin Nan	USA	USA
34	Graham Rodney	CDN	CDN
35	Koons Jeff	USA	USA
36	Export Valie	AT	AT
37	Wurm Erwin	AT	AT
38	Boltanski Christian	F	F
39	Andre Carl	USA	USA
40	Acconci Vito	USA	USA
41	Holzer Jenny	USA	USA
42	Orozco Gabriel	MEX	MEX

Rank	Name and First Name	Nationality	Country of Residence
43	Wall Jeff	CA	CA
44	Smith Kiki	USA	USA
45	Förg Günther	D	D
46	Stella Frank	USA	USA
47	Prince Richard	USA	USA
48	Pettibon Raymond	USA	USA
49	Cragg Tony	UK	UK
50	Cattelan Maurizio	IT	**USA**
51	Huyghe Pierre	F	**USA**
52	Hockney David	UK	UK
53	Sugimoto Hirochi	JP	**JP & USA**
54	Kusama Yayoi	JP	JP
55	Marclay Christian	USA, CH	**USA & UK**
56	Dean Tacita	UK	UK
57	Gillick Liam	UK	UK
58	Buren Daniel	F	F
59	Katz Alex	USA	USA
60	Kabakov Ilya & Emilia	RU	**USA**
61	Long Richard	UK	UK
62	Becher Bernd & Hilla	D	D
63	Monk Jonathan	UK	**D**
64	Dine Jim	USA	USA
65	Ono Yoko	JP	**USA**
66	Neshat Shirin	IR	**USA**
67	Hirschhorn Thomas	CH	**F**
68	Schütte Thomas	D	D
69	Barney Matthew	USA	USA
70	Muniz Vik	BR	**USA**
71	Armleder John M.	CH	CH
72	Tiravanija Rirkrit	TH	**USA & D**
73	Calle Sophie	F	F
74	Tuymans Luc	BE	BE
75	Pistoletto Michelangelo	IT	IT
76	Sala Anri	AL	**F & D**
77	Fleury Sylvie	CH	CH
78	Höfer Candida	D	D
79	Dumas Marlène	NL, ZA	**NL**

Rank	Name and First Name	Nationality	Country of Residence
80	Feldmann Hans Peter	D	D
81	Demand Thomas	D	D
82	Close Chuck	USA	USA
83	Walker Kara	USA	USA
84	Morellet François	F	F
85	Kounellis Yannis	IT, GR	**IT**
86	Zobernig Heimo	AT	AT
87	Penck A.R	D	D
88	Horn Roni	D	D
89	Höller Carsten	BE	**SE**
90	Oehlen Albert	D	D
91	Artschwager Richard	USA	USA
92	Knoebel Imi	D	D
93	Rosler Martha	USA	USA
94	Dijkstra Rineke	NL	NL
95	Gober Robert	USA	USA
96	Morris Robert	USA	USA
97	Kawara On	JP	**USA**
98	Tuttle Richard	USA	USA
99	Moffatt Tracey	AU	**USA**
100	Kosuth Joseph	USA	USA

The first and most important result is the following: even in an era of so-called globalization, a very vast majority of the most consecrated artists in the world (those who are most susceptible to travel and leave their countries of origin) still live and create in the countries where they were born: 80% of them (2 artists share their time between the country where they were born and another one). Endless artistic wanderlust appears to be a myth… And no artist lives on the long-term in more than two countries. Even today, it appears that the creative act is still very much embedded in a given territory (Quemin, 2006). Even when artists travel abroad for a project, they still keep a base that is their home (and that is generally the country in which they were born). Of the top 100 most visible artists in the world, no less than 96 live and create durably in just one country, and only 4 in 2 countries!

Besides, if one examines the countries of residence and not the passports, one notices a change in only 19 cases. That number is far from being negligible but the phenomenon concerns a real minority (and even when artists tend to move to reach an important centre for international creation and consecration, they sometimes continue to live and create partly in their home countries). As a matter of fact, artists whose presence in the rankings of the most recognized creators is most unlikely as regards their nationalities, as they appear very "exotic", have often settled for many years in the "centre" of the international contemporary art world, that is to say the USA, and New York City in particular, and have contributed to the vitality of the American creative scene while increasing their chances to gain better recognition in the international art world.

As mentioned earlier, the USA has already 35 artists among the top 100 in the world where nationality is concerned. However, the figure would rise to … no less than 44.5 if one considers countries of residence! (We attributed a half point for each country in the case of artists sharing their time between two of them). The USA itself thus concentrates nearly half of the most visible artists in the world today! As far as other nations are concerned, the number of artists per country is generally less affected when one adopts this new perspective on the country of residence: the figure moves from 17 to 18 for Germany, from 8 to 8.5 for the United Kingdom, from 5 to 6.5 for France, Austria remains at 5, Switzerland moves slightly from 5 to 4, but Japan moves more markedly down from 4 to 1.5 only. The consecration of Japanese artists appears very dependent on settling in the USA and they often need to migrate to the USA either temporarily—like Yayoi Kusama—or permanently—an iconic example being that of Yoko Ono, the famous widow of ex-Beatle John Lenon, who although presented as Japanese in the Artfacts ranking, has lived in the USA, in New York City, for several decades—to be considered as prominent artists. Belgium, the Netherlands and Canada have two artists each in the ranking when it comes to country of residence and creation, whereas Denmark, Sweden, Mexico and South Africa have only one artist each. Although 21 different countries appeared in the list when passport and nationality were considered for the Artfacts ranking of the top 100 artists in the world, the concentration became even stronger when countries of residence were regarded, for the space in which the most recognized international artists live and create is limited to… 15 countries only. In this respect, non-Western countries in particular tend almost to disappear.

If, once again, we decide to consider the share of each country in the sum of points of the top 100 artists of the Artfacts ranking by taking this time the countries of residence into account, the results are as follows: 46.2% for the USA (nearly 10 more points than when nationality was considered) far ahead of its usual challenger, Germany (18.0%), at a fair distance from the United Kingdom (8.3%), before France (5.8%), Austria (5.0%), Switzerland (4.0%), Belgium (1.9%), the Netherlands and Italy (1.6% each), Denmark (1.3%), Sweden (0.8%), Canada (2%), Mexico (1.0%), Japan (1.3%), and South Africa (1.4%). Once again, it is necessary to underline that Western European countries (as a matter of fact, a very small number of them) and North America hold the concentration of … nearly the entirety of the indicator (96.5%!!!!), that is to say that they tend to concentrate all contemporary creation at its highest level of visibility and success.

The rankings that aim at identifying the best or the most visible or successful artists tend to reflect the uneven distribution of that quality from different perspectives. Our approach focusing on the territorial dimension and considering the influence of the countries show extremely strong concentration effects. There appears to be creative countries as there are creative cities (Florida, 2002), all the more as the existence of creative countries is mostly limited to the presence of one major creative city among all of them (such as Berlin, London, Paris and, above all, New York City).

We decided to take into account the country of the artists as this is nearly always the indication that is given in the rankings that mention the nationality of the creators and not the cities where they live. Still, the scale of the cities is particularly relevant and when the USA, the UK or France are mentioned, it is most of the time New York City, London or Paris that are concerned (the situation is somewhat more complex for Germany where artistic networks tend to be less exclusively concentrated in Berlin, although that city has considerably reinforced its preeminence over the last 15 or 20 years). Still, it should not be underestimated that each of these cities is embedded in its own country and is directly influenced by the laws of the latter (for instance, New York City may sometimes be described as a "global city" (Sassen, 2001) whose limits go far beyond American territory, when it comes to welcoming artists migrating from foreign countries—to take just one example that is relevant to our study in this contribution—the laws that regulate immigration are nothing more than American ones. In that sense, it should be remembered that all these cities, however strongly international and open to the world they may be, are also and fundamentally part of a national territory and entity). Besides, even when it comes to national artists, only a few were born and raised or sometimes even trained in a city that constitutes the core of creativity (Quemin, 2013c) on a national level, which shows that one cannot restrict analysis of creativity to important cities (be they as important megalopolises as New York City) without embedding them in a national perspective, or even in a vast international, global context in order to take the migrations of foreign artists into account.

Besides, it should not be underestimated that these fluxes of international migrations are very oriented and strongly determined by the various positions occupied by the different countries in the art world, and that there exists no actual globalization in the contemporary art world (Quemin, 2006, 2013a) if one understands the term as, that all parts of the world should be concerned, that even fluxes should not be affected by uneven exchanges and by domination effects. The national context remains particularly significant as the majority of artists in each city is of national origin but has come, most of the time, from the rest of the country to the artistic capital city in order to achieve recognition as important artists.

The concern for rankings that we have analysed in this contribution is widely spread in the art world and goes far beyond the only case of artists, even if they represent the social actors that are most concerned with this reduction of uncertainty through the objectivizing of positions via the production of rankings by the art world itself. Not only are there two major rankings that try to objectivize the positions occupied by the most recognized artists in the art world today, the Kunstkompass and the Artfacts ranking analysed earlier, but other rankings have emerged that also try to objectivize the positions occupied more generally by the various actors of the art world. The most famous of these indicators is the Power 100 that has been published annually by the British magazine *Art Review* for more than ten years now—it was created in 2002—and that is supposed to identify and rank the most powerful 100 players of the international contemporary art world, be they artists, curators, museum directors, collectors, gallery owners, auction house leaders, art critics. The existence of this other indicator also shows perfectly that there exists a very strong demand, probably a growing one, for rankings of artists and even other players of the contemporary art world in the social world, that goes far beyond the creators themselves or, as Pierre Bourdieu put it, that try to identify who creates the creators (Bourdieu, 1993). There again, concentration effects (Merton, 1988, Cherkaoui, 2011) on a small number of nations are very strong and most of all, the countries that are most represented among the most influential or powerful players of the art world are generally also those that produce the highest number of star artists (Quemin, 2013b).

CONCLUSION

In this contribution, we decided to focus on the contemporary visual arts in order to explore the rankings that are supposed to objectivize the visibility of artists or even aesthetic quality. We could have probably chosen some other domains such as gastronomy that seem to have known a similar evolution to that encountered by the visual arts at the very beginning of the 1970s. For instance, although the *Michelin Guide* was created in France as early as 1900 as a travel, tourist and gastronomic guide, and many other gastronomic guides have been published since that time, in particular the *Guide Gault & Millau* that rivalled the dominant position of the *Michelin Guide* in the 1970s, it is only recently that, although there had existed a strong tradition of attributing marks to restaurants and thus determining groups of similar quality or even regularly publishing lists of the best restaurants (for example, the 100 best), *rankings* of the best restaurants or chefs in the world have appeared and strongly developed. Although, on the one hand, they are often criticized, it should not be underestimated that, on the other hand, they now tend to have sufficient legitimacy and there is enough social demand for them to be regularly published. It should not be neglected that these rankings developed enormously after the emergence of a new sort of cuisine, personified by Spanish chef Ferran Adria and identified to molecular cuisine that claimed precisely to place experimentation at the core of its practice, turning creativity into the central value for judging gastronomic excellence. This further example of the emergence of innovation and creativity as the main criteria to judge an artistic production (as, in this case, gastronomy clearly leaves the domain of culture for that of art entirely) and the following publication of rankings that try to evaluate the excellence of this very artistic production may suggest that the link between creativity and artistic rankings goes far beyond the example that was studied in this chapter. More often than not, the national dimension of artistic success, that is to say the angle that we chose to study in this contribution, should not be underestimated and clearly confirms the existence of strong concentration effects in social life.

NOTES

1. The public, on its side, generally favors works of art that resonate with their lives (Halle & Tiso, 2014).
2. Only the general principles of the methodology are presented by Artfacts on the following link: http://www.artfacts.net/marketing_new/? Services,Artists_Ranking
3. In our most recent book (Quemin, 2013b), we analyze the effect of gender and age and develop the impact of nationality or country of residence.
4. An exception was made by *Art Review* when it promoted Chinese artist Ai Wei Wei to the first position of its ranking of the most influential actors of the art world in the world, the "Power 100". However, the methodology used by *The Art Review* (asking some "experts" who mostly seem to be collaborators of the journal) is much more basic than that used by the team of the Kunstkompass and by Artfacts and, in the case of Ai Wei Wei's crowning, everybody understood that the nomination was mostly political, in order to give him the support of the international contemporary art world community in his fight with the Chinese régime. Still, it does not really make sense to consider Ai Wei Wei more powerful in the art world than star gallerist Larry Gagosian or mega collector François Pinault, who were ranked after him on the year of his triumph.

REFERENCES

Becker, Howard S. (1982) *Art Worlds*. Berkeley, CA: University of California Press.

Bourdieu, Pierre (1993), *Sociology in Question*. London: Sage.

Bowness, Alan (1989) *The Conditions of Success. How the Modern Artist Rises to Fame*, London: Thames & Hudson.

Cherkaoui, Mohamed (2011) *La crise de l'université*. Paris: Droz.

Florida, Richard (2002) *The Rise of the Creative Class. And How It's Transforming Work, Leisure, Community and Everyday Life*. New York: Basic Books.

Halle, David and Tiso, Elisabeth (2014) *New York's Far West Side Story: Contemporary Art, the High Line, Mega Projects and Urban Change in the City*. Chicago: Chicago University Press.

Heinich, Nathalie (1998) *Le Triple jeu de l'art contemporain*. Paris: Minuit.

——— (2000) "From rejection of contemporary art to culture war", in Michèle Lamont and Laurent Thévenot (eds) *Rethinking Comparative Cultural Sociology. Repertoires of Evaluation in France and the United States*. Cambridge: Cambridge University Press.

Kunst = Kapital. Der Kapital Kunstkompass von 1970 bis Heute (2001) Cologne: Salon Verlag.

Merton Robert K. (1948) "The self-fulfilling prophecy", *The Antioch Review*, 8(2): 193–210.

——— (1988). "The Matthew effect in science, II: Cumulative advantage and the symbolism of intellectual property", *ISIS*, 79(299): 606–623.

Moulin Raymonde (1992) *L'artiste, l'institution et le marché*. Paris: Flammarion.

Moulin Raymonde and Quemin Alain (1993) "La certification de la valeur de l'art. Experts et expertises", *Annales ESC*, numéro spécial "Mondes de l'art", 6(November–December): 1421–1445.

Piles Roger (de) (1969) *Cours de Peinture par Principes*. Geneva: Slatkine Reprints (original edition: *Cours de Peinture par Principes composé par Mr. de Piles*. Paris: Jacques Estienne, 1708 (Amsterdam and Leipzig, Arkstée & Merkus, 1766)).

Quemin Alain (2006) "Globalization and mixing in the visual arts. An empirical survey of 'high culture' and 'globalization'", *International Sociology*, 21(4): 522–550.

——— (2013a) "International contemporary art fairs in a 'globalized' art market", *European Societies*, 15(2): 162–177.

——— (2013b) *Les stars de l'art contemporain. Notoriété et consécration artistiques dans les arts visuels*. Paris: Editions du CNRS.

——— (2013c) "From 'national creativity' to social recognition and success in the visual arts: a social perspective on rankings of the 'top 100 artists in the world'", in Thomas, Kerry and Chan, Janet, *Handbook of Research on Creativity*. Cheltenham, UK, Northampton MA, USA: Edward Elgar, pp. 230–248.

——— (2013d) "La Chine et l'art contemporain. L'arrivée de l'Empire du Milieu dans le monde et sur le marché de l'art", in Jean-Noël Bret and Nathalie Moureau (eds), *L'art, l'argent et la mondialisation*. Paris: L'Harmattan, pp. 77–98.

Sassen Saskia (2001) *The Global City: New York, London, Tokyo* (2nd edn.). Princeton, NJ: Princeton University Press.

Vasari Giorgio (1550) *Le Vite de' più eccellenti pittori, scultori, e architettori da Cimabue insino a' tempi nostri*. (*The Lives of the Most Excellent Italian Painters, Sculptors, and Architects, from Cimabue to Our Times)* Florence.

PART SIX

States and Markets

26

INTERNATIONAL RELATIONS ANALYSIS WITH GAME THEORY

Pierre Allan
University of Geneva

Cédric Dupont
Graduate Institute of International and Development Studies, Geneva

International relations analysis typically focuses on the relationships between various international actors, where one actor can have an impact on others. These relationships are often mutually interdependent. This can be observed even from a realist perspective: steps to enhance security in one state, for example, can have direct implications on perceptions of security in other states. In other words, to give a contemporary example of the well-known security dilemma, security-focused policy choices by China or India not only have domestic implications but can also shape perceptions of security and subsequent policy decisions in neighbouring states. Passively contemplating the evolution of a situation may lead a state to undermine its own security; but to react too quickly or without sufficient reflection can spark a downward spiral of conflict and bring about more insecurity for all parties concerned. In a situation like this, security policy choices by states are interdependent: a decision taken by one influences those taken by others. Similarly, from an economic perspective, interdependence can lead to improved economic growth through international trade.

To analyse these interdependencies, international relations scholars have increasingly used game theory as a tool to facilitate their work. This allows for a rigorous study of interdependence, taking into account both individual and national decisions that in turn shape collective and international decisions. This chapter introduces the foundations of game theory first using two simple games—the prisoner's dilemma and the coordination game—and then showing how they can be made more sophisticated by varying several key dimensions that characterize all game theory approaches. This chapter is not intended, however, to serve as a comprehensive introduction to game theory, nor as an overview of the most pertinent literature.[1]

COLLECTIVE INTERESTS AND UNILATERAL DECISIONS: THE FRAGILITY OF INTERNATIONAL COOPERATION

The security dilemma, as previously mentioned, results from the inability of states to reconcile the improvement of their own security with the concerns this may raise in neighbouring or other concerned states. This no longer presents a problem for members of the European Union but raises important issues in Asia, the Middle East or, as the work of Cherkaoui (2007) suggests, in the Maghreb.[2] When states find themselves in situations of "anarchy"—in the sense of an absence of supranational structures—the benefits of cooperation are reduced by the risks, the endangering of a state's own security, or by reacting too quickly. The structure in which these interactions occur affects the realization of collective interests. Numerous researchers have and continue to address this fundamental problem of international cooperation through the prism of the most representative application of game theory, the prisoner's dilemma.

The prisoner's dilemma owes its name to a situation in which two individuals find themselves implicated in a burglary and arrested near the scene of the crime. The judge on the case does not have enough proof to convict either individual of the crime and can only hope that one of the criminals offers up information on the other. There is, however, enough evidence to convict both of them for lesser crimes than burglary (like carrying an illegal weapon or driving a stolen vehicle, for example). In an effort to get a confession from one or both of the prisoners, the judge places them in separate interrogation rooms. Each prisoner is informed that a confession will reduce their sentence. If both confess, their sentences will be longer than if neither confesses, which would guarantee both of them a sentence for one of their lesser crimes. Knowing this, a confession is the best option (when one prisoner confesses to the judge but not the other), but this could also bring about a heavier sentence than staying silent (if they both confess). The latter option can prove disastrous, however, if the other prisoner decides to talk and denounces his/her partner in crime. In this case, in the absence of complete confidence and the ability of the prisoners to communicate with each other, the prisoners both choose to confess their crime, which is individually rational but negative in terms of their collective interest. It is thus in the presence of a type of rationality "squared," in the sense that each prisoner attributes to the other the maximization of his/her best interest, that each prisoner cannot escape the implacable logic of individual rationality—they are certainly aware of this perverse logic but are constrained by the logical dilemma presented by the situation. This is the result of the judge's will as s/he, as a third type of institutional actor, wants appropriate justice in the interest of society as a whole which desires prisoners to confess their crimes to the judicial authorities.

It is simple to transform this particular situation into a more general analytic form that, as we shall demonstrate below, offers a starting point to examine fundamentally similar but more complex situations. The simplest version is that of a game presented in the form of a decision matrix with two columns and two rows (cf. Figure 1) outlining the possible choices, S1 (corresponding to silence on the part of both parties) and S2 (corresponding to confession), of each actor, Row and Column. The numbers in the different boxes of the matrix reflect the preference orders of the actors concerning their four possibilities, with "4" representing the most preferred and "1" the worst outcome. By convention, the number on the left in each box represents Row's ordinal preference,

		Column	
		S1	S2
Row	S1	3,3	1,4
	S2	4,1	**2,2**

Figure 1: *The prisoner's dilemma*

Note: The Nash equilibrium is denoted in bold text.

and the number on the right Column's preference (so 4.1 indicates this is the best possible outcome for Row and the worst possible outcome for Column).

How can we logically deduce the result of the interaction described above? The two participants in the interaction, referred to as prisoners in the story but "players" in game theory terminology, have a dominant choice—S2, or confession. In effect, each has an interest to confess regardless of the choice of the other. As a result, the choices lead to the bottom right box (or 2,2), which is called the Nash equilibrium. This equilibrium corresponds to a rational choice for each player from which neither can improve their lot by changing their individual choice. On the other hand, if the two players decide to modify their choice and refuse to talk to the judge, the result of both changing their decisions is the top left box—the preferable situation for the players collectively. This collectively optimal situation, however, is not a Nash equilibrium precisely because each of the players could improve their own lot by unilaterally changing their choice. Mutual confession emerges as the best insurance against defection by the other prisoner.

The security dilemma is similar. Each country has an interest in defending itself (with an army, with the help of allies, etc.), but all would experience maximum security if no country sought arms or allies. Thus all find themselves in the sub-optimal situation where both prisoners condemn the other. The security dilemma is also popular for its usage in reflecting the hazards of regulating public goods. The difficulty, indeed impossibility, of regulating access to these goods leads actors to profit from them without, for example, financially contributing to their maintenance or protection. This has particularly negative effects on public goods that are susceptible to overconsumption, like non-renewable natural resources, which can lead to what is called the "tragedy of the commons." In international economic relations, the logic of the prisoner's dilemma underlies numerous analyses of market liberalization. The domestic political difficulty associated with commercial liberalization leads governments to an asymmetrical opening of their markets—the ideal political situation would be to benefit from unfettered access to export markets while at the same time restraining access to the domestic market. This strongly inhibits the dynamics of market liberalization, and can even halt liberalization or result in a protectionist spiral. The logic of this dilemma reflects equally well the cartelization efforts over certain primary commodities, with the Organization of the Petroleum Exporting Countries (OPEC) being the most compelling example of this behaviour. The ideal situation for all members of organizations of this nature is to benefit from elevated prices while maximizing each country's exports. This can clearly lead to collapsing prices, and the eventual failure of such an organization.

COLLECTIVE INTERESTS AND INDIVIDUAL GAINS: COOPERATION, DISTRIBUTION, AND THE NEED FOR COORDINATION

The difficulty of international cooperation is not only the result of the lure of individual gains by international actors. Cooperation can take numerous forms that offer a variety of advantages to different actors. The dilemma is not only to know how to exit a non-cooperative situation but also to decide between multiple cooperation options that are collectively optimal but offer different gains to different actors. The matrix below (Figure 2) reflects such a strategic dilemma.

Different from the prisoner's dilemma, neither Row nor Column have a dominant choice in this matrix. Row prefers choice S1 if Column chooses S1 but prefers S2 if Column also chooses S2. As Column has symmetric preferences, this game has two outcomes—shown in the top

		Column	
		S1	S2
Row	S1	**4,3**	1,2
	S2	2,1	**3,4**

Figure 2: *The coordination game*

Note: The two Nash equilibria are denoted in bold text.

left-hand box and the bottom right hand box of the matrix. These outcomes are Nash equilibria but are also the collectively optimal solutions. Even so, the players diverge on their evaluation of the two outcomes: Row prefers the top left outcome (S1–S1, resulting in 4,3) while Column prefers the bottom right outcome (S2–S2, resulting in 3,4). The stronger this divergence, the greater the risk of a disagreement between the two players.

The logic of the coordination game underlies most international negotiations that require unanimous agreement (or, at the minimum, a substantial majority) between the parties. The severity of the problem this poses is particularly significant when negotiators are discussing indivisible (or hard to divide) issues, and when not coming to an agreement is costly. The position of actors becomes hardened for a small number of potential agreements marked by strong distributive tensions. The "indivisibility" problem is particularly apparent in territorial conflicts over lands with high symbolic value, like Jerusalem for example. In the international economy, the focus of negotiations like the Doha Round under the auspices of the World Trade Organization (WTO) on agricultural issues, on the one hand, and non-agricultural issues on the other, has heightened tensions between industrialized countries and emerging economies, increasing the overall risk of failure of the negotiations. Similarly, ongoing discussions on global monetary imbalances will remain deadlocked as long as the alternatives remain limited to a reevaluation or not of the Chinese Yuan with respect to the US dollar.

FROM SIMPLE TO SOPHISTICATED: DIMENSIONS AND VARIATIONS OF THE MODELS

As the logic of the prisoner's dilemma and the coordination game are found in many game theory applications, these models can be used in a variety of increasingly complex ways to shed light on specific strategic situations. We categorize variations on these games in four principal groups, which are the essential elements of all games:[3] 1) the number of players; 2) the possible choices of all players; 3) the preferences of the players; and 4) the information available to the players as they make their choices. After a brief discussion of the possibilities available to researchers in each of these groups, we subsequently illustrate different modelling combinations with the help of several recent contributions based on the logic of the prisoner's dilemma and/or the coordination game.[4]

Number of players

While the minimum is two players, analysts can add an unlimited number of players to a game. But if the addition of players allows them a certain empirical credibility, notably in a multi-polar world, it also considerably complicates the analysis and reduces the "predictive" capacity of game theory—at the very least, limiting the possible actions of each of the players. The current temptation of researchers is to focus their analysis on the final stages of decision making, often characterized by dichotomized choices.

Choices available to players

The determination of possible choices available to players is made on two levels. First, it is necessary to determine the number of decision opportunities available to the actors: one, as in the case of the games described above, or more, which then must be clearly defined. Secondly, at every available opportunity, the choices available to one actor must be made clear. In the simplest games, each player must choose between two options; in the most complex games, the number of available choices can be infinite, though generally within a defined range or set. The games can, for example, be repeated infinitely—the matrix never changes—but the players are aware that they will encounter the same opponents with the same choices in every iteration (or repetition) of play.

Characterization of preferences

The characterization of preferences on an *ordinal* scale is used only when introducing game theory, as seen above. More generally, a *cardinal* number scale is used, which allows for the use of various mathematical tools when solving games. These analytical requirements, however, do not always correspond with the most practical empirical measures.

Information available to players

Game theory distinguishes between three major types of situations based on the amount of information available to players when they make their choices. In a situation of *perfect information*, players know all the parameters of their interaction at the moment they make their choice, including preceding choice(s) (when possible) of the other player(s). In a situation of *complete information*, the players know all the parameters of the interaction, except the choice of the other player(s), as seen in the above mentioned prisoner's dilemma and the coordination game. Finally, in a situation *of incomplete information*, the players have only limited information on the preferences of the other player(s) developed using their own assessment of possible outcomes.

VARIATIONS ON THE PRISONER'S DILEMMA AND THE COORDINATION GAME

To illustrate several modelling variations using the above mentioned dimensions, we will again use the prisoner's dilemma and the coordination game[5] to exhibit several possibilities. All use the powerful tools of game theory while remaining accessible to a lay audience; these examples address general international relations questions, while revealing the roots of international cooperation in an uncertain world. In particular, they permit us to delve deeper into the dynamics of cooperation over time as well as the influence of domestic politics on this cooperation.

Institutions, norms, and international cooperation

If the prisoner's dilemma reflects the uncertain nature of international relations, how can we explain the frequency and overall success of international cooperation? Essentially, cooperation is explained by considering inter-state relations over the long term. Whereas states may not take for granted successful future cooperation, they are well-aware of the "shadow of the future," or the possibility that the same two or more states may cross paths again in the future. This being the case, in line with a dominant theory in international political economy (see, in particular, Axelrod and Keohane's seminal 1986 article), the creation of international institutions guarantees members a long time horizon and certain future gains thanks to surveillance mechanisms and punitive measures like sanctions.

From this perspective, the following discussion of three major works shows how more complex modelling of international cooperation permits us to address empirical problems more precisely, leading to richer and more interesting analyses. First, Fearon (1998) demonstrated that cooperation can paradoxically be more difficult to foster in the conditions mentioned above, simply because if international institutions allow for the "reassurance" of member states of future outcomes, this makes states even more attentive to distributive issues when these institutions are created or when states join them. His demonstration of this phenomenon uses both the coordination game, in the first phase, and the prisoner's dilemma in a second one. The coordination game is played repeatedly until a proposal by one of the two actors is accepted by the other one. This result then determines the value of the mutual cooperation cell in the prisoner's dilemma, which is played an infinite number of times. Using an identical game structure, Urpulainen (2010) sought to determine the optimal strategies for stabilizing cooperation. He shows, in particular, that solutions based on the compensation principle where cooperation is breached by one of two parties are difficult to put in place and can rout all hope of reaching an initial agreement.

In an article on commercial liberalization, Rosendorff and Milner (2001) consider when states negotiate flexibility provisions into international agreements, putting the paradox underlined by Fearon into perspective. These flexibility provisions allow for the stabilization of cooperation in conditions of uncertainty without paralysing preliminary negotiations. Their analysis is based on modelling the initial game on the choice of flexibility provisions, followed by a repeated game setting trade barriers on a continuum from zero to infinity. Their model rests on the utility functions of governments, including variations in consumer surplus, producers, and customs revenues. Thus, governments are subject to pressure from producers according to external political and economic risks; each government is aware of the strength of these pressures but is uncertain of how they will evolve over time.

Finally, Morrow's analysis (1994b) shows how institutions can also help to resolve issues that in certain cases originate in the paradox discussed by Fearon, like uncertainty over the extent of disagreement in negotiations. Morrow models this uncertainty through the participation of two players in three possible games, a classic coordination game and two games where the players have similar interest in both equilibria of the coordination game. Each game can be repeated without a predefined time horizon, i.e., for an unspecified number of rounds. Both players have information about their *potential* gains from each game but these gains are not guaranteed. This information is based on the views of experts whose opinions may be inaccurate. Thus it is in each player's interest to exchange their points of view with their interlocutor but communication is rendered difficult by the potential existence of disagreement on the individually optimal balance. Morrow's contribution allows for the determination of satisfactory conditions so that international institutions encourage members to reveal information they possess and thereby lead to a collectively optimal solution. In sum, using game theory to model international relations allows us to improve international institutions, similar to the dilemma in which the judge placed his two prisoners.

International cooperation and leadership

For certain analysts, the source of international cooperation in prisoner's dilemma-type situations can be found in domestic politics. McGillivray and Smith (2000) show that a government accountable to its electorate is much less inclined to renege on its international commitments: as a result, confidence between international partners is much easier to establish. Their analysis uses an iterated (or repeated) prisoner's dilemma game where electors can decide whether to keep or change their leaders between each round of play. This decision is based on the leader's actions during the previous round. Players have access to complete information and the payoff values, apart from the values of the four potential results of the game, incorporate a discount factor in the form of a parameter for leaders' interest to stay in power and a cost factor for electors to change their leaders.

Schultz's contribution (2005) further clarifies the link between domestic and international politics but at the expense of a more complicated model. The central question is to determine the "ideal" profile for leaders—hawks or doves—to initiate cooperation in situations of distrust and hostility. To this end, Schultz uses a two-player game where each player has two choices (cooperate or defect), played in two rounds. The originality of this set-up rests upon variation in the payoff parameters, which determine whether a leader is a hawk or a dove. The exact value of these parameters is unknown to the other player but its variation could lead to five different games, one of which is the prisoner's dilemma. In each iteration of the game, the players play sequentially. After the first round, the voters of the actor that played first must choose between the two types of government—hawks or doves—based on the results of the first round of play and the expected results of the second round. Each party is comprised of moderates as well as extremists, and the second player does not know who s/he previously encountered even after the outcome of the elections. This uncertainty promotes cooperation despite whether the players are up against hawk- or dove-like parties. Thus Schultz shows how peace is better served by the elections of hawks (like Richard Nixon or Ariel Sharon) than by doves.

CONCLUSION

Game theory permits researchers, through the rigorous theoretical reflection it demands and the powerful deductions it permits, to go beyond a formal reproduction of nascent theoretical intuitions.[6] Its subtle modelling of the richness of politics, as well as its ability to take into account common knowledge of rationality, opens the door for real developments in the analysis as well as a deeper understanding of international relations games.

NOTES

1. For introductory textbooks on game theory, see Binmore (2007), Dixit *et al* (2009), McCarty and Meirovitz (2007), Morrow (1994a) and Osborne (2004).
2. The work of Cherkaoui (2007) focuses precisely on the relationship between Algeria and Morocco, underlining the evolution of the security dilemma as a function of the respective forces and strengths of the two parties.
3. Notably, these correspond to the different definitional elements of a game in the seminal work by the creators of game theory, John Von Neumann and Oskar Morgenstern (1944: 48–60). Certain authors include a fourth dimension, the concept used for solving a game, like, for example, the Nash equilibrium (see Allan and Dupont 1999).
4. For a more in depth discussion, see Allan and Dupont (1999).
5. The reasoning used for these games can be applied to all others.
6. The theoretical contributions of different models can structure empirical quantitative (large-N) or qualitative (process tracing) studies. See Kuehn (2013).

REFERENCES

Allan, P. and Dupont, C. (1999) "International relations theory and game theory: Baroque modeling choices and empirical robustness", *International Political Science Review*, 20(1): 23–47.

Axelrod, R. and Keohane, R.O. (1986) "Achieving cooperation under anarchy: strategies and institutions", *World Politics*, 38(1): 226–254.

Binmore, K. (2007) *Game Theory: A Very Short Introduction*. Oxford: Oxford University Press.

Cherkaoui, M. (2007) *Morocco and the Sahara: Social Bonds and Geopolitical Issues*. Oxford: Bardwell Press.

Dixit, A.K., Skeath, S. *et al.* (2009, 3rd edn). *Games of Strategy*. New York: Norton.

Fearon, J.D. (1998) "Bargaining, enforcement, and international cooperation", *International Organization*, 52(2): 269–305.

Kuehn, D. (2013) "Combining game theory models and process tracing: potential and limits", *European Political Science*, 12(1): 52–63.

McCarty, N. and Meirowitz, A. (2007) *Political Game Theory. An Introduction*. Cambridge: Cambridge University Press.

McGillivray, F. and Smith, A. (2000) "Trust and cooperation through agent-specific punishments", *International Organization*, 54(4): 809–824.

Morrow, J.D. (1994a) *Game Theory for Political Scientists*. Princeton, NJ: Princeton University Press.

——— (1994b) "Modeling the forms of international cooperation: Distribution versus information", *International Organization*, 48(3): 387–423.

Osborne, M.J. (2004) *An Introduction to Game Theory*. Oxford: Oxford University Press.

Rosendorff, B.P. and Milner, H.V. (2001) "The optimal design of international trade institutions: Uncertainty and escape", *International Organization*, 55(4): 829–857.

Schultz, K. (2005) "The politics of risking peace: Do hawks or doves deliver the olive branch?" *International Organization*, 59(1): 1–38.

Urpelainen, J. (2010). "Enforcement and capacity building in international cooperation", *International Theory*, 2(1): 32–49.

Von Neumann, J. and Morgenstern, O. (1944) *Theory of Games and Economic Behavior*. Princeton, NJ: Princeton University Press.

27

NORMS AND DEROGATION IN MOROCCO'S PUBLIC FINANCES

A Durkheimian Explanation

Noureddine Bensouda
Treasurer General of the Kingdom of Morocco

When a system is as complex as public finance, and it is viewed as a social fact according to Durkheim's definition, it is easy to demonstrate how much time and labour are required to undertake reforms that are resisted by what two major founding fathers of sociology, Emile Durkheim and Max Weber, have described as "habitus", a set of principles and mechanisms of socialization that reveals its influence after we believe we have changed the system.

I believe that through analysis of certain norms in Moroccan law, established for and by society and based on the educational system, it is possible to interact with Mohamed Cherkaoui to achieve a better understanding of the "rationality" behind decision-making in the field of public finance and its limits. My contribution to this subject will make use of the Durkheimian theory as interpreted by Mohamed Cherkaoui (1998, 2005) especially when related to the modes for producing social facts.

I will start from a central Durkheimian proposition according to which humans possess both social and individual identities. First, individuals, despite their rationality, continue to be influenced by groups and norms to which they conform in order to strengthen the "cohesion and solidarity of the group" (Cherkaoui, 1998: 43). However, conformity does not mean that the individual has no real ability to deviate from the norm taking all inherent risks.

Second, as Cherkaoui has firmly stated in his interactionist interpretation of Durkheim's theory, 'social systems' means essentially sets of complex interactions between social actors that are the real mechanisms that create norms and the explaining principles of "change, stability and balance, as well as crises". He is therefore able rightly to deduce that "the central category, without which no understanding of reality is possible, is not consensus, but the struggle between social groups".

My objective in this contribution is to show how this theory could be applied to public finance, when taking into account will to change, resistance due to habits and the phenomenon of the social and individual duality of human nature.

1. PUBLIC FINANCE NORMS FACING RESISTANCE OR WILL TO CHANGE

In order to analyse the process of establishing norms for public finance in Morocco, one has to scrutinize the government's political operating system, to know how and according to which political, economic, social, and symbolic logical processes these decisions have been designed, debated, shared, mediated and finalized.

Indeed, and far from being simple, one-sided, clear-cut, linear and neutral, the norm design process in Morocco and elsewhere is rather the result of a collective and social building system, which is often very complex, laborious (Cherkaoui, 1998)[1] and obscure, involving interactions among an array of social actors, a plurality of logical processes and a diversity of interests, that must be broken down, restored, reframed, and rebuilt so as to seek out a path leading to the emergence of the norm.

The aim is to make methods for creating norms in public finance and their process of creation more understandable, considering the persistence of habit as inertia and resistance to be forces against change and the final decision-making power of parliament in norm creation; or, in other words, against the institutionalization of democracy, a hot topic in many countries now facing the question described as "the new Cambridge controversy" (Cohen, 2012)[2].

In this regard, Edward Glaeser, Professor at Harvard University and Daron Acemoglu, Professor at Massachusetts Institute of Technology (MIT) have engaged in a very relevant exchange on economic development and democracy. Glaeser argues that economic development leads to democracy. Acemoglu "however, is much more sceptical about the tendency of democracies to sustain economic growth" (Cohen, 2012)[3].

Daniel Cohen refers to some studies "showing that democracy may reduce economic growth when it triggers populist struggles (political one-upmanship) between social actors, for example" (Cohen, 2012)[4] notably when it comes to instituting laws in public finance.

In recent decades, Morocco has experienced major political and constitutional changes leading to the strengthening of parliament's power. Parliament is supposed to create norms. However, the power of government, and in particular that of the civil service, should be decreasing.

This trend has been reinforced mainly due to the vigilance of members of parliament, businessmen, civil society and judges as well as the professionalism shown by some government departments to ensure proper compliance with law and the separation of powers.

Indeed, the noticeable presence and greater professional participation of those concerned have become part of political, economic and social life. Compared to the first short-term[5] parliaments that Morocco experienced, the parliaments of the past four decades[6] since the 1980s have all fulfilled their legal mandate, except the most recent Parliament that ended eleven months before its mandate which was due to expire in September 2012, on account of protests in the Arab world claiming institutional reforms.

This longevity has encouraged the emergence of experienced parliamentarians especially in the complex field of public finance. On the other hand, business organizations and chambers of commerce and industry as well as civil society, despite being in an early stage of development, have acted to make their voices heard and ensure the creation and application of laws to respect their rights. Judges have helped by influencing the work of public administrations and their actions by handing down decisions on cases relating to public finance, even though there have not been many.

Despite this vigilance, the rule of law and the separation of powers have not been sufficiently observed because the latter is subject to the application of "strict sanctions", as Cherkaoui (2006) and other sociologists have argued.

This is one reason that could explain why the will to strengthen parliament and law covering public finance in particular has not been suitably institutionalized. This is probably in part, as Cherkaoui rightly said, because institutionalization of a rule or a "norm is sometimes possible only after a long period that can be measured in decades, or even centuries."

But it is painfully clear that whenever the vigilance of one actor decreases, past practices reappear, and derogations from new norms that were once considered abolished have been resumed, due to the non-institutionalization of sanctions (Cherkaoui, 2006: 183).

Two examples can be offered to illustrate this situation. The first example concerns the tax incentive for social housing introduced by the Finance Act of 2010, and the second relates to the social solidarity contribution applied to profits and incomes established by the Finance Act of 2013.[7]

The benefit of tax exemption in social housing for primary residential use is subject to conditions that the General Tax Code has specified in detail and time scale.[8] This code provides that a notary establishes the sales contract within a maximum of thirty (30) days starting from the date the government transfers the VAT (value added tax) to the notary.

The General Tax Administration (GTA) has eliminated this time scale and has allowed[9] the notary to "conclude the contract prior to the transfer without including the contract part covering the VAT", doing this simply by a letter to the President of the Moroccan Chamber of Notaries.

The argument behind this change, without prior authorization of parliament, as the GTA stated in its General Tax Code circular memo,[10] is "to accelerate the process of concluding social housing sales contracts".[11] Nevertheless, this acceleration seems to benefit property developers by assuming they are a social group, since their cash burden is reduced even if sales contracts are not fully concluded. On the other hand, buyers, for whom the legislator theoretically granted all these incentives, will have to wait before actually becoming owners of their homes.

The second example concerns the tax basis of the social solidarity contribution on profits and incomes applied to companies and individuals which was deliberately extended[12] in order to increase its scope of implementation and therefore its revenues. Indeed, if the method of reckoning the social solidarity contribution applied to companies[13] is very precise, the one applied to individuals is not.

The law does not define the notion of "individuals' tax-paid Moroccan-sourced income". This cannot be done through a mere administrative memo[14] that taxes the "beneficiaries of incomes mentioned above … even when exempted." This same memo provides two definitions of net taxable income, firstly as income with the due amount of income tax (IT) deducted (in the case of professional[15] income and property income[16]), and secondly as income reduced by the amount of IT and other selected deductions, as in the case of salaried income. It should be recalled that when parliament excluded some exempted items from the tax base or included them, this was done deliberately. Similarly, in the case of the social solidarity contribution which applies to companies.[17]

However, when parliament wanted to incorporate an exempted element or an item to be deducted, these were specifically mentioned. This is the case of participation in national solidarity[18] introduced by the Finance Act of 1980 that included incomes temporarily exempted either completely or in part; also included in its calculation base were function—or job-related expenses and family-related charges.

These two examples taken from tax practice in Morocco show that despite constitutional and political evolution, we sometimes experience a return to the culture of replacing the legislator by the public administration (see Bensouda 2009: 304 and following) in the field of law.[19]

The tax administration due to its ubiquity has over time been able to develop relative autonomy and manoeuvre its limits to interpret, formalize and shape, according to its own manner, the application of tax decisions (Bensouda, 2009: 422). It is present continuously from the preparation of draft laws in consultation with economic operators, their submission to government councils and ministers' councils, their discussion in parliament, their interpretation by circular memos and their application to the public. In this regard, Tax Administration has acquired a legitimacy that competes with the power of parliament, to such a degree that we can speak of the "de-legalization" of tax rulings.

This has developed due to its theoretical and empirical expertise - actual or assumed - but also to the coercive power of the tax administration, constituting therefore a "status group".

It is clear that the internalized social culture called "a certain collective attitude" (Durkheim, 2010: 108) that interested social actors believe in, is more powerful than political rules that are voluntarily defined and which are expected to represent a form of rationality.

The most striking feature of the two examples previously mentioned is that, in our society, there is an ubiquitous culture of deviation from norms. The first example of VAT exemption granted to social housing represents a positive derogation in favour of a social group despite the existence of a clear and accurate norm.

The second example of the social solidarity contribution on profits and incomes is a negative derogation for employees because it increases their amount of payable tax.

The social culture of deviation from norms raises the issue of whether it is an isolated phenomenon or a social fact as defined by Durkheim to resist the will of individuals and time. Does it fit into a tradition of protest and a negotiated acceptance of norms, expressing therefore a consistent wish to always benefit from permanent derogations? Is it also the impact of interactions from social actors whose interests are strongly defended?

Actually, what we notice in the matter of deviations from the norm is that it appears to be a phenomenon that is rising dramatically and is tending to move from an instrument for exceptional cases to a real public finance management style, marked by strong sectoral influence and a spirit of budgetary and tax corporatism that Mohamed Cherkaoui (1997) calls a "singular macro-phenomenon". The behaviour of an individual depends on the number of those who have adopted it, hence constituting a "snowball" effect.

Moroccan financial law does not yet possess what Mohamed Cherkaoui (2006: 90) quotes Western law, saying that it "alone has completely eliminated personality from laws and the old maxim that the law of exception is above common law".

Indeed, despite regulatory efforts undertaken by the government, pressure groups continue to be a highly active social class in public finance, because as Mohamed Cherkaoui has explained: private operators know market workings in greater depth far better than bureaucrats. They also have the capacity to retaliate so that laws are voided or rendered ineffective and can even lead to results contrary to their objective if such legislation goes against their interests.

In short, referring to Durkheim "We move from a rigid social structure … to an ideally isonomic society within which nothing is considered as regulated and fixed anymore and where everything is mobile and subject to open competition between individuals" (Durkheim, 2010: 179).

It is through human social and individual duality that we will explain this culture of deviation from the norm.

2. THE DUAL IDENTITY OF HUMANS: ACCEPTING NORMS AND ENCOURAGING DEROGATION

Public finance does not rely on a sequential linear and logical process (Cherkaoui, 1998)[20] based on successive and purely factual phases.

It starts rather, as Mohamed Cherkaoui (1998) explains through Durkheim's theory, from a system of interaction between actors to explain the emergence of a macroscopic fundamental fact which is the division of labour, so that "the ultimate value of the cultural system and any project of social actors is the affirmation of individuality" (*ibid.*: 121).

Indeed, norms that have been formalized, legitimized and published by policy makers who ultimately assume the ensuing responsibility actually conceal a whole array of social actors involved in a framework of relationships and intertwined interactions made up of alliances, associations, rivalry, power relationships and sometimes disagreements, leading one to often marvel at the level of freedom and degree of autonomy the government enjoys.

For example, reform of public procurement regulations, due to its strong political, economic, financial and social issues, involves a multiplicity of actors with different interests, logical processes and values, to the point that there is "therefore a kind of natural situation dominated by an all-out war without armaments" (Cherkaoui, 2006: 91).

The government as the regulatory authority of the public procurement process should obviously reflect and reconcile all these conflicting interests, which sometimes clash. It must regulate a complex interplay of powers, confront corporatist particularities and ultimately mediate between multiple and sometimes conflicting aspirations, requirements and expectations.

However, Mohamed Cherkaoui (1997, 2005) draws our attention by referring to the example of a mechanical clock borrowed from Nagel: the mere juxtaposition of the components of a fact or a system keeps silent about their properties and cannot report on their behaviour.

Since each actor or group of actors is driven by a search for its own interest identified according to its specific rationality, goals and preferences, it is generally drawn into conflict with the interests of other actors.

Mohamed Cherkaoui (2006: 42), through Durkheim's theory of the dual nature of humans, which is both social and individual recalls that "we are pushed in a social direction and we tend to follow our natural inclinations".

Occasionally, even if social and economic players display a coalition of interest and shared objectives and strategic choices, they do not necessarily place them on the same level or give them the same priority. Furthermore, they seek to shape norms according to their own priorities and demand derogations that they are sometimes able to obtain.

Derogations are perceived where the norm (rule of law), which is, in principle, intended to govern a specific situation through fair and even application to everyone impersonally, finds itself in competition with 'parallel practice' that establishes other specific and personal rules that lessen, overcome or circumvent the conditions or constraints set by the norm.

Employment and public procurement figure in most of these cases.

As an example, and concerning administrative practices, there are some individual government actions when recruiting for official positions that deviate from fundamental conditions stipulated by laws or regulations.

Indeed, whenever the government responds to popular demands, or even sectoral or private interests, it willingly chooses to proceed by individual actions to overcome regulations of general scope governing the recruitment of government personnel. This arises in cases of exemptions to competition requirements, such as age or educational qualifications.

In fact, regarding the recruitment of young graduates, we have noticed in the recent past that whenever the authorities engage in social dialogue, enforcement of rules and regulations laid down by law for everyone sometimes tends to be weakened drastically by the pressing demands of society, so that there exists more a "natural condition" than "a legitimate social order".

This ambivalence in the administration's behaviour towards the legal norm is explained as Mohamed Cherkaoui has clearly stated by the imbalance between on the one hand the determination of private actors to defend their economic interests, and on the other hand the moderate resolve of government on the whole to promote compliance with the law.

In my view, financial public order cannot be sacrificed on the altar of social peace, because as Mohamed Cherkaoui (2006: 160) states: "Peace is a noble value, but seeking peace at any price leads to endangering other fundamental values such as freedom", and we could also add the fundamental value related to the stability of the state's finances.

The government's action tells us about the model of governance adopted. Contravening the rule of law or 'bypassing' it by public actions disturbs the image of the rule of law and damages the relationships of trust and predictability essential to public projects.

In public procurement, it is politics rather than the administration that damages the principles of equality, legality, general interest and the proper use of public funds.

The use of non-standard procedures in public procurement, namely, the use of direct negotiation processes and raising the ceilings of purchase orders considered justified by the urgency of implementation, creates confusion and inconsistency at the expense of compliance with tendering standards and the conditions for issuing purchase orders.

But the most important effect linked to this type of behaviour is that it establishes the idea of derogation as a management method, which makes public governance inconsistent with its own management reference table; there is an “eviction effect” concept which operates in favour of non-standard procedures.

In this regard, it should be noted that the use of these practices, if it occurs, according to terms and conditions stipulated in the Decree of February 5, 2007 regarding government contracts, raises no legal or ethical concern. However, the use of direct negotiation procedure in cases not covered by regulations is challenging both on legal and management levels.

This culture of derogation in public procurement creates not only unjustified financial burdens on services requested by government but also breaches the principle of equal treatment of companies in public procurement. It intensifies the feeling of distrust that prevails regarding the law, its credibility and its applicability. It gives credence to the image of uncertainty in legal and institutional processes held by society.

Some believe that this is due to the general environment and survival of past practices. They therefore agree with Durkheim’s socio-historical theory which is certainly illustrated and highlighted by realities of the present, but which respects the specifics of former institutions and doctrines without which any understanding is impossible.

This culture of derogation from the norm is integrated into the behaviour of interested actors. When designing a legal rule (law), its formalization, interpretation and everyday shaping, these people often take into account the historic, cultural and religious environment (Hermet, 2001), which allows them to determine, in all their aspects, the burdens which consciously or unconsciously, visibly or invisibly, affect and determine choices; because, as Cherkaoui explains: any transformation coming into conflict with the acquired and organized past is difficult and laborious; it is then accomplished only through necessity

In conclusion, it seems that the method of norm creation in public finance and elsewhere, as we have shown, displays true positive interaction between different groups and the actors involved, and that explaining this process would, as Cherkaoui has stated, disclose all necessary relationships between social phenomena, dependence on which may not be apparent at first glance.

This interaction and the logic in articulating the various rationalities involved, which means that each player loses a part of his independence in decision-making and selection, should not induce the political system to allow interested actors to undermine the vital functions of the system that ensure its survival.

In this regard, Durkheim stresses the logical and historical impossibility of a destructive conflict inherent in a social and cultural system.

Obviously, "expectations are rising much faster than they can be satisfied" (Cherkaoui, 1998: 81, 113, 121, 127; 2002, 2005), which can worsen conflicts.

Therefore, in-depth reforms should be carried out. They are often costly and time-consuming. Nevertheless, change cannot be forced in a complex society built around many players influenced by family, professional, political, religious (Willis, 2012: 28) and social networks.

These networks are "more or less restrictive and organized, through which individuals express their freedom. We do not really 'change' unless we trust people who are the only real innovators, and not trying to fix everything for them in every detail; otherwise impasses and inertia will be worsened, which will then lead to a reinforcement of the bureaucracy we are fighting against" (Crozier, 1979: 16) instead of strengthening democracy; this would be a significant example of the theory of the paradox of consequences.

NOTES

1. Indeed, as Mohamed Cherkaoui stated in a footnote, on p. 49 of the same book: "Apart from a few occasions when it is possible to study empirically the entire process of norm creation, most often the observer does not have enough time. This may explain the paucity of anthropological contributions to this question. The ethnographer's time in the field is generally too short to allow understanding of such phenomena."
2. In 2007, the *Wall Street Journal* devoted a great debate to the subject quoted by Daniel Cohen (2012: 126–129).
3. *Idem*, p. 127.

4. *Ibid*., p. 127, Daniel Cohen cites Robert Barro, "Democracy and growth," National Bureau of Economic Research, working papers, No. 4909, 1994.
5. First Parliament from November 1963 to April 1965, the second from October 1970 to December 1971.
6. Third Parliament from October 1977 to July 1983, the fourth from October 1984 to August 1992, the fifth from October 1993 to August 1997, the sixth from December 1997 to April 2002, the seventh from October 2002 to September 2007 and the eighth from October 2007 to November 2011.
7. Initially created by the Finance Act of 2012 under the name of "contribution in support to social cohesion" applicable to companies.
8. Article 93 of the General Tax Code provides that government pays the purchaser the amount of VAT charged on acquiring the said housing. This amount "is paid by the tax administration officer to the notary as part of the price equal to the amount of VAT stated in the sales contract on the basis of the sales agreement".
9. Letter from General Tax Administration of March 8, 2011, subject: application of 2010 Finance Act‘s provisions on social housing.
10. This note added a paragraph on this question, which was not included in 2010 Finance Act's circular on tax provisions.
11. Note no. 717 on General Tax Code Book 1: rules of tax basis and collection, April 2011, p. 66.
12. Circular note no. 721 on tax provisions of Finance Act no. 115-12 for fiscal year 2013, p. 60.
13. This contribution is calculated for companies "based on net profit for the financial year …". This profit is defined by Article 330 of the law no. 17-35 of August 30, 1996 on public companies as being "distributable income (which) consists of net income for the year reduced by prior losses and amounts that are subject to reserve ...", which the circular of the General Tax Code cites on p. 193. Circular note No. 717 on General Tax Code book 1, *op. cit*.
14. Circular note no. 721, pp. 59, 60..
15. "The amount of net profit or minimum benefit or the sum reduced by income tax due (Impôt sur le Revenu)", Circular note no. 721, *op. cit*., p. 60.
16. "Contribution applies to gross income reduced by amount of compulsory social charges and contributions and amount of Income tax due. In this case, contribution is levied on the basis of salaried income actually received by taxpayer", idem.
17. As defined in Article 2 III "excluding corporations permanently exempt from corporate income tax referred to in Article 6-IA which concern "associations and organizations legally treated as nonprofit organizations … etc.".
18. Official Journal no. 3504 bis of Safar 11, 1400 (31/12/1979).
19. Article 71 of the Moroccan Constitution of 2011 provides that "tax system and tax basis, rates and tax collection methods" are in the field of law.
20. As shown by Mohamed Cherkaoui (1998: 11), when he says referring to Schumpeter, "scientific analysis as Schumpeter pointed out (1954: 4) is not a simple logically coherent process that starts with some primitive notions and increases the stock of knowledge in a straight line".

REFERENCES

Bensouda, N. (2008/2009), *Analyse de la Décision Fiscale au Maroc*. Paris: Édition la Croisée des Chemins.

Cherkaoui, M. (1997) Le réel et ses niveaux: peut-on toujours fonder la macrologie sur la micrologie?, *Revue Française de Sociologie*, 38: 497–524.

——— (1998) *Naissance d'une science sociale. La sociologie selon Durkheim*. Geneva: Librairie Droz; English translation, *Durkheim and the Puzzle of Social Complexity*. Oxford: The Bardwell Press, 2008.

——— (2002) "Relative deprivation", in J. Smelser (ed.), *The International Encyclopaedia of Social and Behavioral Sciences*. Amsterdam: Elsevier.

——— (2005) *Invisible Codes: Essays on Generative Machanisms*. Oxford: The Bardwell Press.

——— (2006) *Le paradoxe des conséquences, essai sur une théorie wébérienne des effets inattendus et non voulus des actions*. Geneva: Librairie Droz; translation, *Good Intentions. Max Weber and the Paradox of Unintended Consequences*. Oxford: The Bardwell Press, 2007.

——— (2009) *La confiance dans les institutions au* Maroc. Rabat: IRES.

Cohen, D. (2012) *Homo Economicus, prophète (égaré) des temps nouveaux*. Paris: Editions Albin Michel.

Crozier, Michel. (1979) *On ne change pas la société par décret*. Paris: Éditions Hachette Littératures.

Emile Durkheim (2010) *Les règles de la méthode sociologique*, new edition. Paris: Éditions Flammarion.

Hermet, G. (2001) *Les populismes dans le monde, une histoire sociologique XIXe–XXe siècle*, Paris: Fayard.

Nagel, E. (1961), *The Structure of Science. Problems in the Logic of Scientific Explanation*. London: Routledge and Kegan Paul.

Willis, M.J. (2012) *Politics and Power in the Maghreb, Algeria, Tunisia and Morocco from Independence to the Arab Spring*. London: Hurst and Company.

28

EQUITY AND SELF-DETERMINATION IN WESTERN SAHARA

An Alternative Path to an Enduring Compromise[1]

Rachid el Houdaïgui
Faculty of Law, Abdelmalek Essaadi University, Tangiers

On 13 April 2007, Morocco submitted the project for autonomy in Western Sahara to the UN Secretary General.[2] This initiative had the merit of engaging the *Manhasset* negotiation process. After 4 rounds of negotiations, the parties remain in their initial positions. To unblock the situation, the Security Council invited, through resolution No. 1871 of April 2009, Morocco and the Polisario Front to informal and limited negotiations. Resolution 2099 (April 2013) attempts to inject a new dynamic by recalling that the fifth series of negotiations must demonstrate "realism and a spirit of compromise to move forward with negotiations". First formulated in the report dated 14 April 2008 (S/2008/251), the concepts of realism and compromise seem to take shape within the new diplomatic approach taken by Christopher Ross, Personal Envoy of the UN Secretary General for the Sahara.

But how far can the parties to the conflict go? What are their blocking factors? Does the failure in organising the referendum not reflect the practical limitations of the formal interpretation of self-determination?

Can we thus see, in it, the failure of the formal approach (or the approach through regulations) of international law or its failure to adapt to the resolution of the Sahara dispute? Does the realistic approach in terms of the social objectives of international law not have the right to bear witness to the analysis of this conflict? How can extra-judicial factors be included in the resolution of the dispute? What correspondence is there between politics and law within the dynamics of the conflict? In the aftermath, which other particularly inclusive principle of international law could give a practical sense to self-determination? Is the principle of equity convenient? Is autonomy as an expression of equitable self-determination consistent with the configuration of the conflict and international law?

The conflict of Western Sahara as a research topic is a complex subject that requires complex thought, according to the words of Edgar Morin (1990): the complexity of this issue is measured by the number of the factors intervening in the conflict (international law, geopolitics, economics, politics, anthropology), the number of parties involved (Morocco, Algeria, the Polisario Front, Mauritania), as well as the weight of the powers concerned (Spain, France and the United States) and the geopolitical dynamics of the region (Moroccan-Algerian tensions, the asymmetrical Sahel–Saharan threat, the political instability of Mauritania, etc.). One might say that the analysis of the conflict must not avoid the correspondence that exists between judicial and extra-judicial factors, on the one hand, and the game of stakeholders involved and concerned, on the other hand. As shown by Cherkaoui's (2007) remarkable *Morocco and the Sahara: Social Bonds and Geopolitical Issues*, only an interdisciplinary approach could unravel the logical connections between issues and intentions that drive the Sahara dispute.

In the wake of our research exercise, we have adopted a scientific approach that has the task of observing and explaining, at the same time, the limits of the process of conflict resolution for the Sahara and the reality of conflict dynamics in the Sahara. Therefore, it is not a question of taking sides at the level of values or of evaluating the situation of the conflict according to our own personal, political or moral convictions. All in all, our reasoning is supported by direct and indirect authoritative references. The theoretical framework of our study revolves around a general approach to international law that makes a connection between the rule of law and social reality. In this sense, this approach takes into account political and social phenomena to understand international law. Transposed to the conflict of Western Sahara, this theoretical construction raises a number of heuristic questions: At what stage can the international community call for an alternative judicial approach different from the one deemed insufficient or ineffective? Can the observation of the social ineffectiveness of the traditional judicial approach pursued in the management of the Sahara conflict justify the adoption of a new alternative approach? Insofar as the conflict in the Sahara is subject to the principles of the right of peoples to decide for themselves and self-determination, does the failure of the organisation of the referendum not devoid these two principles of their judicial status?

The threat that may be suggested to understand the dynamics of the Sahara conflict is that the sustainable and equitable solution remains dependent on the capacity of the parties to overcome difficulties through a political intelligence that recognises the need to redefine the legal approach to the conflict beyond traditional regulatory and legalistic approaches to international law (i), the usefulness of equity, taking into account, on the one hand, the ineffectiveness of external self-determination and, on the other hand, the importance of extra-judicial factors and the importance of equity as a judicial reference principle to guide the resolution of the conflict, through autonomy as an expression of equitable self-determination (ii).

I. INTERNATIONAL LAW AND THE WESTERN SAHARA CONFLICT: "THINKING OUTSIDE THE BOX"?

The diplomatic arguments of the parties to the conflict are built upon opposite legal grounds. Morocco, on the one hand, and the Polisario Front and Algeria, on the other hand, conceive and interpret the rule of law that regulates the Western Sahara conflict differently. Therefore, there is a doctrinal controversy that reinforces antagonism and deprives the region of a legitimate consensual framework for the settlement of the dispute. A reflection on alternative legal means is necessary. It is even more feasible since international law offers political resolutions (negotiation, mediation, conciliation) to exit crises and which are often based on equity.

1.1 Irreconcilable Diplomatic Differences Over Doctrinal Grounds in the Dispute

Behind the positions of both parties to the conflict, Morocco and the Polisario Front, a theoretical debate emerges that opposes both approaches of international law, the approach called critical and the formalistic approach. A dividing line is set between the Moroccan arguments, which rely on the dialectical and evolutionary logic of international law, close to the critical school, and the arguments of the Polisario Front, supported by Algerian jurists[3] and which remains essentially true to traditional legal formalism.

1.1.1 Traditional Legal Formalism

Legal formalism focuses on the regulatory force of law and its formal capacity of opposing and rising above national politics. It refuses to take into account factors that are external to existing positive international law, whether it is the cognitive framework (philosophical approaches to law) or facts (sociological, political, financial or psychological approaches to law). In this sense, the task of jurists, researchers and officers should focus more on the explanation of "[the] positive judicial order, namely by interpreting existing legal regulations and highlighting the logical relationships existing between these regulations" (see Salmon, 2001: 516). However, jurists are not responsible for issuing a judgement about the legitimacy, role or responsibilities of positive law on the international community. From a formalistic standpoint, the definition of aggression or the right of peoples to self determination is found in the interpretation of formal sources such as the UN Charter, resolutions of the United Nations General Assembly and, where appropriate, any other formal sources. Attorneys are thus obliged to limit themselves to texts and prevented from taking into account the context and accompanying extra-legal factors. This is thus an approach more prone to the description of existing rules than to their questioning or the development of new ones. The existing legal standard is maintained not only to guarantee its perpetuity but also to assert its superiority over the will of States.

It is still certain that variants in formalism admit to the evolutionary nature of international law by taking into account repeated practices in the case of customs or a review of the convention concerned in the field of international treaties.

1.1.2 The Dynamic Critical School

Meanwhile, the critical school thinks of international law in a dynamic way, within the framework of the production, application and evolution of regulations. It is diametrically opposed to formalism both in its interpretation of the idea of an "international community", the weight of the rule of law and the will of States and its approach to the purpose of international law. The institutionalisation of international relations has allowed for the emergence of multi-lateral diplomacy on behalf of the international community. However, the preponderance of States and conflicts of interest prevent the emergence of a truly integrated international community. This paradox causes, according to the critical approach, a deviation from the idea of a pluralistic community in the sense of a political logic aimed at legitimising the diplomatic or military actions of great powers (see Klein, 2001). Therefore, behind an appearance of universality hides a hegemonic unilateral practice that is dangerous for the entire international community. Action, omission and inaction are the versions of this trend that has reached unprecedented dimensions with the American invasions of Afghanistan and Iraq. Regarding omissions, the lack of will from the international community in the management of the Israeli-Palestinian conflict is a symptom of the absence of equitable universal initiatives to deliver justice for Palestinians. The longevity of the Western Sahara conflict, meanwhile, puts it back in the repertoire of indecisions of the international community regarding a conflict that must be approached in its entirety and multiple dimensions. The *status quo* seems to guide the strategic choices of members of the Security Council, even while the Moroccan proposal of autonomy introduces a new and relevant component to the process for the resolution of this conflict.

In the same fashion as legal formalism, the critical school acknowledges the primacy of the rule of law as the basis of formal resources of international law. However, it insists on the correspondence of this rule with international social reality and, particularly, which the paradoxes that characterise it. In other words, this school of thought is interested in the relationships of power that govern the creation of a legal rule as well as in those who dictate its interpretation. Therefore, the explanation of a legal principle, even though it may be universal, must not be solely limited to the interpretation of formal sources but must also and in particular take into account evolution of the context to explain its meaning and often selective use by States. In the aftermath, international law is conceived in terms of social purpose, insofar as its legality and its binding force stem more from its capacity to promote social goals (Koskenniemi, 2007: 61 and ss.). Formal regulatory validity is thus not so much denied but demoted in the name of effectiveness.

1.1.3. The Game of Legal Argumentation of Morocco, the Polisario Front and Algeria

The formal and critical approaches to international law provide parties to the Western Sahara conflict sources for argumentation to articulate their own theses and legitimise their positions. Since the advisory opinion of the International Court of Justice (ICJ) of 16 October 1975, we are witnessing a game of contradictory legal "conversation" between Morocco, on the one hand, and the Polisario Front and Algeria, on the other hand, regarding the legitimacy of their positions. The issue is to take over what David Kennedy (2009: 2) calls the "capital of legitimacy" of international law, allowing them to convince the international community. And, as with any communication efforts, the two parties make an effort to target organisations with neutral resonance (the UN and other international organisations) and those favourable to their theses (States and other international players). In this logic, each party invokes arguments based on sovereignty or self-determination to demonstrate the utopic aspect of their opponent's position and its selfish and sprawling nature. Both lines of reasoning support diametrically opposed theses, despite their failure, even during the informal negotiation phase, to result in measures of trust that may guarantee favourable conditions for the resolution of the problem.

This situation can be shown by an analysis of the positions of Morocco and the Polisario Front regarding the self-determination of

Western Sahara. Since the beginning, the Polisario Front and Algeria have based their strategy on the basis of the right to self-determination, automatically conferring independence for the Sahrawi. This thesis refers to the United Nations Charter[4] and to Resolutions 1514 of 14 December 1960 and 2625 of 24 October 1970 of the General Assembly of the United Nations. Meanwhile, Morocco adopts a position that acknowledges the universal dimension of self-determination and the resolutions of the General Assembly, as it has accepted the advisory opinion of the ICJ, which has ruled in favour of the right to self-determination and acknowledged the existence of secular allegiances between the Sultan of Morocco and Saharan tribes. However, Morocco has reserved the right and the liberty to interpret the legal scope of these rules differently. It has thus made the principles of allegiance and territorial integrity the legal bases of its position. This position later evolved after Morocco proposed, at the Summit of the African Union in Nairobi in 1981, the organisation of a referendum. But it was not until the 1990 settlement plan that we could see both parties agree to a cease-fire and the organisation of a referendum providing the choice between remaining part of the Kingdom of Morocco and independence.

Twenty years later, both parties cross their arguments, as part of informal negotiations, on opposite doctrinal bases: on the one hand, the Polisario Front and Algeria cite the concept that seeks for self-determination of Sahara to be based on the right to self-determination of the Sahrawi, through a referendum that guarantees independence; on the other hand, Morocco affirms that there are options other than independence to achieve the liberty that all people legitimately claim. In fact, the option defended by Morocco is one of democratic self-determination in the form of autonomy.

Neither of these positions can be privileged by the international community, which continues to call for "a just, enduring and mutually acceptable solution". The doctrinal controversy is at the heart of the problem while it reinforces antagonism between the parties and deprives, consequently, the international community of a legitimate consensual framework for the final resolution of the conflict. Because, given the commitment of the parties in direct talks and taking into account that an international political decision is likely to ultimately intervene in order to arrive at a solution, a redefinition of the reference judicial framework becomes necessary. This would be a framework that would match the point of view of the legal criteria of self-determination and the point of view of the simple fact that the effectiveness of self-determination[5] could indeed provide an equitable basis to the outcome of the dispute.

1.2 International Law Between Legal Legitimacy and Political Necessity

The longevity of the Western Sahara conflict raises the theoretical problem of the anachronism of certain rules of positive law and their practical limitations. What is the purpose of international law, other than to protect the international community from risks and threats (see Jouanet, 2007)? The desire to live in peace finds an institutional response in the United Nations Charter, the significant number of multilateral agreements and the dynamics of international organisations. However, this goal cannot be accomplished while the effectiveness of the rule of law is dependent upon the will of States and the game taking place within the Security Council or other bodies of the United Nations. Therefore, a confrontation arises between, on the one hand, the main stakeholders in international political production, States, and, on the other hand, universal and independent legal standards. The State is the main source of international law but it continues to perceive international relations in terms of a balance of power, resulting, for instance, in the United States never accepting that one of its leaders may be brought before an international criminal court. It is convenient to share James Brierly's idea, according to which "international law attempts to make and define or to limit different spheres within which each State that dives the world for its political objectives can exercise its authority" (Brierly, 1944: 3, quoted in Koskenniemi, 2007: 330). However, this does not mean that universal legal standards are devoid of importance. The rules of *jus cogens*, for instance, are connected to universal consciousness and inherent to the existence of a civilised international community. This gives it an imperative nature which cannot be derogated without consequences.

In fact, this paradox generates a situation where international law corresponds more to an "argumentative social practice" than to a regulatory structure independent of States. Therefore, the resolution of an international crisis does not only stem from the formal language of the law to settle disputes, it also belongs to political context which often shapes the trajectory of the ultimate solution. A credible legal argument would necessarily take into account legitimacy and effectiveness, rules and facts, in its reasoning, so that the legal criteria and the factual context intermingle in a view of common sense. On this subject, Richard Falk (1969) specifies that the role of contemporary doctrine is to adopt an approach that is " …[m]ediating, maintaining the distinctive sign of judicial rule while responding to the extra-judicial framework of politics, history and morality" (quoted in Koskenniemi, 2007: 64).

The theoretical approach of this study revolves around a general approach to international law that creates a relationship between the rule of law and social reality. In this sense, this approach takes into account political and social phenomena to understand international law. We approach international law and its dynamics through three integrated elements of analysis: international law is based on the will of States; the balance of power that governs the creation of the rule of law and its subsequent interpretation; and the social purpose of law. In this sense, international law would be a legal order of the contract type, where a rule that cannot be accepted is excluded from being enforced on a State. In the same fashion, the rule, both in the process of its creation and in its interpretation, raises conflicting interpretations that continue after its adoption. At the same time, the legal nature of law is affirmed through its effectiveness and its capacity to make social goals advance without denying the importance of its regulatory power.

Transposed to the conflict of Western Sahara, this theoretical construct raises a number of heuristic questions. Can the observation of the social ineffectiveness of the traditional legal approach pursued in the management of the Sahara conflict justify the adoption of a new alternative approach? From what stage can the international community call for an alternative legal approach different from the one deemed insufficient or ineffective? Insofar as the Sahara conflict is subject to the principle of the rights of people to decide for themselves and self-determination, does the failure in the organisation of the referendum not devoid these two principles of their legal status?

The fact is that law and politics are the two sides of the Sahara dispute, they interfere and interact so much and so well that it is impossible to foresee a solely legal solution or solely political solution. In the first scenario, the referendum is based on a "winner takes it all" logic while the second, the political "fait accompli" would simply be devoid of any interpretation of equity. This finding reflects an inclusive interpretation of the conflict that closely binds the requirements of international law to political, social and geopolitical needs. According to this approach, international law cannot be properly interpreted if it is not firmly anchored on the social context of international politics. However, it is not a question of diluting the binding force of law in social facts but rather of recognising, with Martti Koskennieni, that an international system based on the primacy of law hides the fact that all social conflicts must be resolved by political means.

Therefore, the Sahara conflict deserves an individual assessment based on alternatives rooted in international legal practice. As such, the principle of equity seems to be the most effective way to settle the question of the Sahara insofar as it is recognised by international law "as an application of principles of justice for the resolution of a given dispute in order to fill gaps in positive international law or to correct its enforcement when it is too rigorous".

1.3 Equity as an Alternative Way to Settle Disputes

Equity is marked by three concurrent directions: being rooted in international law, through the practise of States and international institutions, jurisprudence and doctrine; having identity forged in the judicial settlement of disputes, particularly in maritime borders; having broad perspectives but full of uncertainties in the non-judicial settlement of political disputes.

1.3.1. Equity, an Integral Part of International Law

The difficulty faced by jurists, whether practitioners or researchers, in approaching the principle of equity, is to identify its regulatory and operational boundaries. It is common for equity to be defined by referring to what is "fair", "reasonable" or "appropriate". Such notions are as evasive and inaccurate as the notion of equity itself and do not allow for it to be based on solid legitimate bases. Moreover, equity suffers from certain prejudices that project it in opposition to law; it is loaded with subjectivity, as is argued, and would risk "paving the way for subjective assessments that, therefore, are sometimes arbitrary".[6]

However, equity is called upon, and continues to be, by national legal systems and international regulations and practices. But, before its institutionalisation, the principles of equity were established by Greek philosophy. Aristotle establishes a connection between justice, equity and law when he says "… the difficulty is that, what is equitable, even if just, is not exactly in conformity with the law but rather an advantageous modification of what is just that is rigorously legal",[7] and finally concludes that equity "remedies the inconvenience stemming from the general nature of the law".[8] Roman law consolidated its bases through the connection with *jus honorarium* (decisions made by magistrates) that allows for the completion, support or correction of *jus civile* (law contained in laws, plebiscites, senatus consultations, imperial constitutions, etc.). Muslim law consecrates it as a source, through the principle of *Istihan*, which authorises rulings based on equity. Therefore, we can see the prominent position of equity in legal systems (Islamic, Romano-Germanic, Chinese, Indian and Common Law).[9]

During the long process of institutionalisation of the international community, through universal rules and institutions, equity, as another source of international law, was able to base itself on a legitimacy that differentiates it, additionally, in fact and in form, from equity in national legal systems. The first goal of the Charter of the United Nations (art.1 §1) is "to maintain international peace and security, and to that end: to take … measures … in conformity with the principles of justice and international law …". There is a tacit recognition of equity that seems to emerge from this text, through the use of principles of justice on the side of the rule of law in the settlement of disputes.

Meanwhile, jurisprudence has attempted to define the contours of equity without managing, however, to designate a general legal principle.. This is due to the mistrust that nourishes the Court regarding the type of equity that seems to support Olivier Pirotte, who explains that *"the Court (ICJ) must say what is lawful and not provide subjective rulings under the cover of vague moral rules that are often questionable* *and more or less assimilated to equity*" (Pirotte 1973: 93). However, it is necessary to ascertain that jurisprudence has strongly consecrated equity as a means and an end. It is sufficient to note that ICJ rulings or those of arbitration courts for maritime border laws have ruled on the basis of equity. The ICJ ruling in the matters of the continental shell of the North Sea, given in 1969, was the first to explicitly consecrate the principle of equity as an integral part of international law (Pirotte, 1973: 93).

Doctrine, in its exercise of reflection, faces the difficulty of identifying a common thesis on the subject of the terminology and substance of equity. The attempts to provide an etymological definition of the term are based on the concept of *ex aequo et bono,* amicable composition and settlement of interests. Regarding its function, equity includes categorisations according to which it affects the application of law more deeply or less so. This is the real problem of the relationship that should exist between equity and law: do judges provide justice when making an abstraction of a rule deemed insufficient or severe in favour of an independent interpretation of said rule? Can they create a new rule on the basis of equity to fill the legal vacuum?

Doctrine is sufficiently unanimous regarding the response to this problem. To this end, it identifies three functions of equity, with some differences regarding the scope of each of its functions. "*Intra legem*" equity, without departing from law, is a means of interpretation and application of rules. The opinion of the Institute of International Law of 3 September 1937 fits this meaning by specifying that "equity is normally inherent in the sound application of law"; "international judges are, by their very duties, called to take it into account to the extent compatible with law". "*Praeter legem*" equity occurs in case of a legal vacuum or of a failure (or lack) of existing rules in a specific case. Here, the function of equity appears sometimes as corrective and sometimes as residual to the rule of law. The conflict between law and equity disappears in favour of an alternative use of the latter. Overall, in this case, the judge resorting to equity is subject to the consent of the parties. *Contra legal* equity constitutes a means to put law aside. Therefore, parties to the conflict will ask the judge or arbitrator to rule on the basis of equity to the exclusion of ordinary legal rules. The judge will rule "*ex aequo et bono*", meaning according to the personal feelings that the judge has regarding what is equal or good or what is equitable.

Having found that the rule of equity is adopted by international law, we still have to examine the main components of equity.

1.3.2 Equity as a Junction of Justice and "the Relevant Circumstances of the Case" in Legal Disputes

International jurisprudence bestows two main elements on the equity of international law. First of all, it is about justice, which represents the general legal foundation of equity and of the element of "relevant circumstances in the case" as a particular legal foundation of equity. In other words, any solution, judicial or non-judicial, of a dispute and that is based on equity should attempt to match these two elements.

Justice constitutes the general foundation of equity found in all cases. Equity leads to justice, in a fashion quite different from law. It is not a system of rules but a subjective feeling about what is just and unjust, especially as manifested in the interpretation of a specific concrete case (see Lalande, 2010: 295). The ICJ explicitly recognises that equity "stems directly from the concept of justice",[10] that judges must never ignore for the entire decision process.[11] This idea of justice is manifested first in what we can call the principle of equality of parties to the conflict. Making an abstraction from the doctrinal debate, the question of equality between the parties is essential but delicate as it is difficult to specify the concept of de facto equality as opposed to legal equality. In the face of the law, the parties are equal but, in the face of contextual conditions, the attributes of power and other important factors make a difference. From this perspective, the goal of an equality that responds to equity must attempt to restore a balance between different situations because equal treatment fully hides the inequality of conditions that may lead to injustice. The Permanent Court of International Justice argues that "legal equality excludes any discrimination; de facto equality can, however, make different treatment necessary for the purpose of arriving at results that establish a balance between different situations.[12] The judge or arbitrator must therefore use a value judgement to discern negligible differences from those that are not, for the equal treatment of the factors taken into account. This search for quality ensures human values as it calls on universally recognised principles of justice.[13]

The process of evaluation through equity reaches the state of operational exercise from the moment where the judge or arbitrator identifies and applies the parameters that allow the relevant circumstances in the case to be taken into account. This second element of equity represents the specific foundation of it in the specific case where this rule is to be applied. Relevant circumstances imply a wide variety of factors that seem to be infinite in number. The determination of these circumstances is closely linked to the specific features of the region. Relevant circumstances are factors (geographical, historical, political, geopolitical, etc.) that may make the resolution of the dispute (or matter) unfair if they are not taken into account. In other words, they represent characteristics that, in case they are ignored, would lead to an unfair result that would not serve the interests of any of the parties to the conflict. The consideration of relevant circumstances essentially depends on the unfair effect that they may have on the final solution if they are not taken into account at all. Therefore, they constitute the measurement and reference grids through which the equitable solution must be sought. J.P. Quéneudec stresses that "there is not and, without a doubt, there cannot be a general definition of the concept of relevant circumstances. They are, in fact, highly variable from one case to the next. They seem to be specific to each case …".[14] In fact, relevant circumstances are related to the extra-legal characteristics of the dispute, they represent resorting to equitable considerations by the judge or the States in their practice. Ultimately, they are elements that play a corrective role (or require the correction) of the previous solution that has been objectively adopted.

In no case does resorting to equity weaken law, it reinforces it. This is because, as stated by judge Arechaga: "equity is … nothing other than the fact of taking into account an entire series of historical and geographical circumstances, the intervention of which does not weaken justice but, on the contrary, enriches it."[15] It is thus almost impossible to arrive at an equitable solution while ignoring the circumstances proper to the region."[16]

1.3.3 Equity as a Way of Settling Disputes Extra-legally

At this point in the analysis, we have particularly highlighted equity from a legal perspective. The reason for this is that the settlement of disputes, in particular in matters of maritime borders, represents most of the use of equity. However, the problem in our study is located in the register of the extra-legal resolution of disputes (political and diplomatic), given that Morocco and the Polisario Front are involved in negotiations. However, the review of jurisprudence and even of the doctrine related to the use of equity allows for the detection of elements that can be transposed to the case covered in our study. Should we first shed light on the scope of equity in the settlement of disputes through political means such as direct negotiation or settlements through the intervention of third parties? Regardless of the nature of negotiations, whether bilateral or under the aegis of an organisation, the parties argue on the basis of international law. However, it is common for equity, the balance of power and even opportunity to arise in the game of stakeholders, injecting, consequently, a horizontal element into the reference framework for negotiations. Therefore, the centre of gravity of the negotiation will slide away from international law, without detaching itself, and towards a field where considerations of a strategic, political and financial (…) nature intermingle. Equity does have a place within this configuration, due to both its reasoning and its persuasion. It promotes the development of the ideal of justice in a world where the legal obligation of the settlement of disputes through judicial means is not yet imposed. Globalisation generates new disputes that further open the way for resorting to equity. Above, we highlighted that the Charter of the United Nations adopts equity in a flexible manner. In article 1, the Charter invites its members to *"maintain international peace and security"* and to do so *"in conformity with the principles of justice and international law …"*. However, it is necessary to highlight that article 33 of Chapter VI of the Charter excludes disputes that are not likely to threaten the continuity of international peace and security from its scope. On the other hand, when the Security Council deals with a dispute, the question on the basis under which this dispute should be settled arises repeatedly. V.D. Degan wonders, rightly, whether the Security Council is bound to base its deliberations exclusively on international law, as well as on the opinions of the International Court of Justice, or if there are other factors that may influence its decision, such as equity or the balance of power.[17] It would seem that practice tends to take into account the entire series of judicial and extra-judicial aspects that may be taken into account in favour of an equitable resolution of the crisis. Since the purpose of negotiations is to reach an agreement, the Parties have the obligation of behaving in such a way that negotiations are meaningful and that, taking into account all the circumstances, equitable principles are applied. In the case of Western Sahara, for example, the resolutions of the Security Council give rise to a discourse situated between two baselines; on the one hand, there is self-determination as a legal rule and, on the other hand, there is the obligation of arriving at a fair result that is long-lasting and mutually acceptable, which is inherent to extra-legal facts.

2. THE ELEMENTS THAT REPRESENT THE PERTINENCE OF EQUITY IN THE SETTLEMENT OF THE WESTERN SAHARA CONFLICT

Equity gains its full scope in the Sahara issue. The two elements that make it up: justice and its corollary equity between the parties and the relevant circumstances of the conflict are manifested in the Sahara issue through two categories of fundamental elements: 1) The legal rule in question, being self-determination for the Western Sahara; 2) the power of considerable individualisation[18] of the Western Sahara conflict. It is a question of determining the path of the principle of self-determination and the practical limits of its effectiveness in the case in question regarding the Western Sahara issue. Therefore, it is about explaining the extra-legal (political, geopolitical, security-related, human and sociological) factors that must be taken into account in the quest for equity.

2.1 External Self-determination in Western Sahara Between Legitimacy and Practical Limits

The practice of external self-determination for Western Sahara is legally based on the jurisprudence of the ICJ and in the resolutions of the bodies of the United Nations. However, the stalemate of the conflict leads to the belief that the legal approach adopted for the settlement of this dispute is confronted by functional blockage factors.

2.1.1 International Law and External Self-determination in Western Sahara

In the first part of this study, we have demonstrated that the rule of law remains heavily politicised by the historical process of its institutionalisation and by the different interpretations by different States. The right to self-determination is the best example. It is the product of a process that dates back to the First World War, where arbitrators were the United States and European powers. Today, it is confirmed by many texts, in particular the United Nations Charter (art.1§2, art. 55) and the two International Pacts on the Rights of Man of 1966, Resolutions 1514 (14 December 1960), 1541 (15 December 1960) and 2625 (24 October 1970) of the General Assembly of the United Nations.[19] The ICJ has confirmed this trend in the Namibia case (21 June 1970), the Sahara case (16 October 1975) and the East Timor case (30 June 1995).

International practice generally makes an important distinction between two types of self-determination: 1. The right to external self determination, synonymous to a right to independence, is admitted in the case of former colonies and in the case of peoples subject to foreign military occupation; 2. The right to internal self determination which gives a population with specific political or cultural features in a State the power to govern themselves without any prospect of secessionism.

The legal body of the United Nations places Western Sahara in a situation for which international law recognises the legitimate exercise of the right to external self-determination. It is dominated by the opinion of the ICJ of 16 October 1975,[20] which ruled on the basis of the two following questions:

1. Was Western Sahara *(Rio de Oro and Saguiet El Hamra)*, at the time of colonisation by Spain, no man's land (terra nullius)? If the answer to the first question is negative:
2. What were the legal ties between this territory and the Kingdom of Morocco and the Mauritanian people?

From the outset, the Court states that Western Sahara was not terra nullius. It then acknowledges the existence of ties of allegiance between the Sultan of Morocco and Saharan tribes, while excluding the notion of sovereignty between the Western Sahara territory and Morocco. While the advisory opinion of the ICJ remains an opinion that lacks, in general, a binding nature, its moral power as well as the jurisdiction and impartiality of the Court give it sufficient authority for the bodies of the United Nations and the international community.

The resolutions of the Security Council and the General Assembly have since referred to the legal elements of the opinion as well as to the Declaration on the granting of independence to colonised countries and peoples of 14 December 1960 and resolutions 1514 (XV) of 14 December 1960 and 1541 (XV) of 15 December 1960 to affirm the option of external self-determination for Western Sahara. A review of these Resolutions allows us to detect to stages in the UN interpretation of the external self-determination of Western Sahara: the first stage corresponds to the period of war between Morocco and the Polisario Front, supported by Algeria, and the adoption of a settlement plan in 1990 that includes a cease-fire and the organisation of a referendum giving people the choice between remaining part of the Kingdom of Morocco and independence; the second stage covers the political dynamics marked by peace plans and negotiation. During the period between 1975 and 1999, the UN defended the thesis of self-determination from the sole perspective of independence. Resolution 4521 of 20 November 1990 of the General Assembly, adopted in a context marked by the preparations to organise the referendum, reaffirms that the question of Western Sahara "is a question of decolonisation to be completed on the basis of an exercise by the people of Western Sahara of their inalienable right to self-determination and independence". The failure to organise the referendum caused a crisis of trust between the parties to the conflict that, therefore, found their interests in maintaining the *status quo*. The second phase, from 2000 to the present day, shows a positive development towards the centrality of a political and negotiated solution as well as the UN interpretation of self-determination for Western Sahara. In fact, four years after the failure of the peace plans, Baker I and II, Morocco submitted its initiative for autonomy for Western Sahara to the United

Nations Secretary General on 11 April 2007. A debate within the UN followed, revolving around the principle of self-determination and the legitimate formulas it can generate in addition to the option of independence. Therefore, options competing with independence began to find a favourable echo in the process of self-determination for Western Sahara. Resolution 62/116 of 10 January 2008 considers, on this matter: "that all the possible formulas for self-determination of territories are valid as long as they correspond to the freely expressed will of the people concerned and they are in conformity with the principles clearly defined in resolutions 1514 (XV) of 14 December 1960 and 1541 (XV) of 15 December 1960 and other resolutions it has adopted".[21] Resolution 2099 (2013) recalls the recommendation made in the report dated 14 April 2008 (S/2008/251), according to which it is essential for the parties to demonstrate realism and a spirit of compromise in order to go forwards with negotiations.

This change in the UN interpretation of external self-determination applies through the fact that the international community has well understood that, despite the failure of former negotiations, the parties to the conflict have shown a true commitment to reach an equitable political solution. This has resulted in the fact that placing new options (autonomy, etc.) on the table, alongside the option of independence, will undoubtedly increase the likelihood of reaching an agreement. On the other hand, no solution to the conflict is possible if it does not take into account the trend in international practices in the field of self-determination and the evolution of the context of the conflict.

However, it would be a mistake to think that such a conceptual advancement implies questioning the option of independence. The UN remains faithful to its founding principle of the right of the Sahrawi to freely choose between several options, including autonomy or independence. The referendum remains the only way but, given that the reasons that led to the failure of the first attempt of the Peace Plan in 1990 remain and are further reinforced, the likelihood of seeing a referendum organised seem to have decreased.

2.1.2 The Practical Limits of External Self-determination for Western Sahara

The right to external self-determination for Western Sahara goes through the path of the referendum. However, the main stumbling block to settling this dispute is the difficulty in organising the referendum. The report by the Secretary General of the United Nations of 12 July 2000 identified inherent difficulties: the identification of people not yet interviewed by MINURSO; the development of the appeals process; the re-establishment of the right to participate in the referendum for the 7,000 Moroccan applicants declared admitted and later withdrawn from the provisional list of voters; the implementation of the results of the referendum; the application of the code of conduct to be respected during the referendum campaign; the requirement of concordance for the testimony of *Chioukhs* (tribal chiefs) representing Morocco and the Polisario Front; the marginalisation of oral testimony as evidence while the Settlement Plan puts it at the same level as Spanish documents for the purposes of identification and appeals; and the repatriation of refugees.[22]

The origin of the failure to organise a referendum is thus found in the discrepancies between Morocco and the Polisario Front regarding the composition of the electoral body. The 1990 settlement plan establishes the census carried out by the Spanish in 1974, which counted almost 74,000 people, as the basis to draft electoral lists. If the Polisario Front has accepted this idea it is because it considers this census as determining Sahrawi identity. However, Morocco refuses to accept this electorate and demands the inclusion of the Sahrawi who, since the 1950s, have emigrated towards northern Morocco or Mauritania. The difficulty, or even the impossibility, of determining who is Sahrawi and who the "Sahrawi people" are the factor blocking the process of identifying voters.

This reality raises a deep question about the compatibility of certain universal norms with the case of Western Sahara. The referendum, for instance, is interpreted by international law as the only peaceful path to rule on the future of a territory. However, in Western Sahara, it has been repeatedly shown that the criteria established for the organisation of a referendum are incompatible with the anthropological reality of the nomadic Sahrawi population. And, even if a referendum was held, nothing indicates that its outcome could bring peace to the region. There will always be a loser who will dispute the results and the legitimacy of the winner. Furthermore, as stated by Zartman (1990: 46), a referendum "does not indicate either the end or the attenuation of a conflict but simply its transfer to a different method of resolution". The "*winner takes it all*" approach is thus inappropriate.

The recognition of the characteristics of the Sahrawi people is another paradox of international law. Theoretically, the concept of people is not framed by a doctrinal consensual definition or an original regulatory definition of the United Nations. This "chameleon word" that Edmond Jouve (1978: 105) references, is one of the concepts that resists "any universally valid definition". Its definition is consolidated through its application during the decolonisation period, which makes it an essentially territorial and variable notion in the case at hand. In the case of Western Sahara, the population is organised into ancestral nomadic and independent tribal structures which Spanish colonisers unsuccessfully attempted to organise. Nomadic tribes have always been refractory to a central authority and were never constituted into a pre-colonial homogeneous entity (Mohsen-Finan, 1998: 9). In part, this explains their preference for being bound to the Sultan of Morocco by a non-binding deed, such as an allegiance. Moreover, this anthropological particularity of the Sahrawi is powerfully materialised during the process for the identification of people entitled to participate in the referendum. The development of oral testimonies, for example, was very delicate due to the constant mobility of the population. In his report of 19 September 1991, the United Nations Secretary General Pérez de Cuellar states: "due to their nomadic nature, the populations in the Territory easily cross borders to go to neighbouring countries where they are welcomed by members of their tribes or even of their families. This ebb and flow of populations at the level of the borders of the Territory makes it difficult to carry out a complete census of the inhabitants of the Spanish Sahara, and also poses the delicate problem of identification of the Sahrawi in the Territory and, beyond this, a satisfactory census of refugees".[23]

In the first part of this study, we have shown that international law remains heavily politicised by the historical process of its institutionalisation and by differences in interpretation between States. The Sahara issue is a symptom of this reality, as two lines of logic clash since the beginning and without the prospect of an end:

— The logic of a State, historical but committed, on the one hand, to a political reconstruction process in order to correct the fragmentation of its territory due to colonisation and, on the other hand, the maintenance of the intangibility of judicial and political specific details (allegiances) in the face of an ethnocentric fait accompli of International Law.
— The logic of an entity that attempts to translate its specific cultural features into a principle of territorial self-determination. Throughout this conflict, it has enjoyed a political identity, despite being transcended by tribal and political differences. Sahrawi trends are thus in an awkward position regarding the Polisario Front when they support a middle solution based on the proposal of autonomy.

2.2 The Weight of Extra-judicial Factors Structuring the Conflict

The principle of equity has the merit of giving an important role to extra-judicial elements in the assessment of the subject of the dispute. In the issue of Western Sahara, we have specified that the problem is hidden behind legal principles (decolonisation and the principle of people's right to self determination) but extra-legal elements interfere, even though they must be taken into account as a central point throughout the process for the resolution of this conflict in the same fashion as the international rule of law.

2.2.1 The National Factor

Each of the parties makes the conflict of Western Sahara its political "raison d'être", a lever of political legitimacy or even a pillar for the construction of a Nation-State. This hypothesis can be related to scientific work, indicating the importance of geopolitics in the formation and consolidation of Nation-States. As Robert Good (1962) remarks, foreign policy is a determining factor in the construction of Third-World States. Other studies designed to evaluate the effects of the end of the bipolar system on Arab countries demonstrate the power of the "outside'" in the construction and consolidation of political governments. The work of the Montreal school develops the concept of the "demands of state-building in which foreign policy has a significant role (see Korany et al. 1993). Foreign policy will serve the purpose of responding to the structural characteristics inherent to Arab countries: internal fragility and external vulnerability. Fred H. Lawson is even more explicit when he suggests that the demands of state-building are the construction of a stable government, a national economy and a solid diplomatic position.

In Morocco, the various territorial claims made by Moroccan authorities after independence in 1956 are typical cases that contribute to the construction of the Nation State, as they raise the problem of the human and territorial extension of the Moroccan nation.[24] The union between the King and the people has the strategic base of recovering national integrity: the territories colonised by Spain, including the Sahara to the South and *Sebta* and *Mililia* and the neighbouring islets to the north. In the case of Western Sahara, the monarchical institution has monopolised nationalism to solidify a national unity through a constant mobilisation of political parties and public opinion. In fact, it is the architect of the recovery strategy that began in 1964 and that hit top speed with the Green March in 1975 and the acceptance of the referendum in 1981 to arrive at the peace plan of 1990 and current negotiations. It should suffice to say that, in the Moroccan strategic interpretation, the return of Western Sahara to Morocco should not be subject to haggling and the responsibilities of each party come into play, while the option of independence is not admitted as it would cause durable political instability for Morocco with terrible consequences for the entire region. In fact, the monarchy would have a hard time surviving such a failure and the country would pay a high price (see Mohsen-Finan 2006).

Algeria, which supports the Polisario Front at the financial and diplomatic levels, is aware that it builds its international image on the "principle of self-determination of people" and commits its prestige to the support of independence for Western Sahara. In the minds of Algerian decision-makers, any solution that takes into account its interpretation of self-determination as independence can be weakened from the inside and would reveal to the entire world that its hidden objective is to weaken Morocco in order to become a regional power. For Algeria, the Sahara issue represents a question of internal politics and even one of the pillars of the balance of power. It occupies a prominent place in the agenda of the Algerian army. But, since the arrival of President Bouteflika, we have seen the political management of this matter slide towards the Algerian presidency. Military security is the interface between the president's cabinet and the army, which, however, continues to exercise the right to examine this matter. The army secures the scope of intervention of the Polisario Front; it organises and controls its political and military personnel. But its obsessive concern is the unpredictable behaviour of thousands of armed Sahrawi individuals who must be neutralised without being disarmed. A hypothesis emerges from this idea: would the Algerian army be ready to accept any political solution provided that it drives gunmen away from Algerian territory?

The Polisario Front does not envision an option other than independence as it considers that it remains the sole representative of the Sahrawi, while we know that other competing political structures do not follow the same political lines, in the fashion as the *Khat Achahid* (the path of martyrdom).

2.2.2 The Geopolitical and Security Factor

The Maghreb remains a region where paradoxes consolidate: while the strategic importance of integration in Maghreb is great, its operational resources are slow to deploy. The more the Maghreb ideal is claimed by all, the more that sincere and resolute political will is lacking. In the rhetoric of foreign Maghreb politicians this is often very present at the same time as a dream and an imperative. Despite the confusing situation of inter-Maghreb relations, Morocco and Algeria do not consider each other less active or inclusive members. The broad national consensus on this issue confirms the official positions. This discourse considers that the Union of the Arab Maghreb demands the reduction of barriers that have inhibited its development for decades and that rely mainly on political questions, in particular the question of Western Sahara.

This case is indicative of the strategic rivalry between Algeria and Morocco. Whoever controls Western Sahara will control the Maghreb. Algeria seeks to achieve its strategic objective, which is to have a path to the Atlantic Ocean with great strategic value as it will open up a geostrategic perimeter for it, stretching from the Gulf of Guinea to South America. This opening will allow it to girdle Morocco by depriving it of its African historical and geopolitical depth. Proof of Algeria's ulterior motives are the proposal to partition Western Sahara between the Polisario Front and Morocco. For their part, Moroccan authorities cannot tolerate the creation of a micro-State since they consider the Sahara territory a continuation of the strategic depth and a lever of its continental dimension. The failure of normalisation attempts launched by Morocco towards Algeria since 2000, through the systematic call for the opening of terrestrial borders and the initiatives undertaken to promote economic integration, could have, to a point, surpass Moroccan decision-makers to the point of the Maghreb taking a turn; bitterness is certainly visible but discouragement is still not provided. Morocco continues to think that the blocking factors can be dissolved at the price of direct negotiations between Morocco and Algeria, under the condition of demonstrating good faith and good will in respecting the constitutive elements of the States in order to avoid a scenario of Balkanisation in the Maghreb.

All in all, the Maghreb is facing a fork in the road with different consequences. The first is based on the good will, the good faith and the commitment of Morocco, on the one hand, and of Algeria and the Polisario Front, on the other, to put an end to the crisis on the basis of compromise and pragmatism, as highlighted in the Resolution of the Security Council of 30 April 2010.[25] This is the path for a solution negotiated on the basis of an initiative of autonomy that ensures the liberty and dignity of the peoples of the Sahara within a united and plural political system, where the region will be given the central place in the political construction of the Nation State in Morocco and maybe even in the Maghreb.[26]

The second path, full of uncertainty, corresponds to the failure of formal and informal negotiations, which would drive the Maghreb region to chronic instability. The stiffening of political positions built on a primary selfish viewpoint of national interests and false perceptions lead to insensible geopolitical situations such as the closure of land borders between Algeria and Morocco. The arms race, which takes place in both countries, should normally engage and mobilise all the good will of countries in Europe and elsewhere in the direction of a Moroccan-Algerian approach, only to unblock the negotiation with the purpose of arriving at a negotiated, fair and equitable solution that guarantees the dignity of the Sahrawi peoples and the territorial integrity of Morocco.

Moreover, the cost of strategic rivalry in the Maghreb is so high that it deprives the region of a common strategy against challenges, namely, of the asymmetric threat. In fact, terrorism, organised crime and illegal migration are many of the factors that destabilise both the Maghreb region and the greater Sahel–Sahara region. The vectors of these transnational threats are networks that operate in several areas and at several levels at the same time (local, transnational, regional, international) according to their needs. On the other hand, they redrew a new map of territories, between "de-stated" areas and areas of law, transcending national or geographical borders thanks to their mobility and their ability to adapt to each new situation. These networks thus thrive in two places: The Sahel–Sahara band and its Atlantic border thus form a belt, a hub for all sorts of networks: drug networks, contraband networks, networks of human trafficking, terrorist network: Aqmi; arms trafficking network.[27] In this sense, the Tindouf area in the border between Morocco and Mauritania constitutes an interface between the Sahel and Northern Africa as well as between the Sahel and the Atlantic coast. In these geographical area, an informal war economy, based on predation and criminalisation, takes share and ensures prosperity for network chiefs who, eventually, divide the dividends with their troupe, their local clients and their external allies. This system lives through the maintenance of a situation of intense insecurity. Therefore, the connections between these different forms of banditry and terrorist and insurgent networks no longer have to be proved since the circuit of financial crime as well as the routes for drug trafficking and illegal immigration are instruments of mobility used by all the networks acting in border areas and beyond. They are mobile within a vast and difficult to control geographic region: the Sahara. Banditry transcends borders and uses very advanced technological means. It organises the transport and logistics of the commerce of human poverty and drug trafficking and guarantees its protection by a game of allegiances with armed and insurgent groups.

2.2.3. The Transcendent Cleavage of the Structures of Saharan Society

The complexity of the situations caused by 39 years of conflict in the Sahara can be measured here by the essential character of the anthropological factor. The population is organised into ancestral nomadic and autonomous structure that Spanish colonisers unsuccessfully attempted to organise. Nomadic tribes have always been refractory to a central authority and were never constituted into a pre-colonial homogeneous entity (Mohsen-Finan 1998). Today, Sahrawi social organisation is transcended by the effects of the conflict, resulting in a complex sociological configuration. First of all, cleavages are now infra-tribal and put those who favour independence against unionists and, since the Moroccan Plan of Autonomy (PMA), a third path to autonomy is manifested. Cleavages also appear between members of the same family due to opposite political positions. Among others, we can mention:

- **Cheikh Mohammed Biyadillah** (Rguibat tribe), military commander in the Lahmada region within the refugee camps in Tindouf (Algeria) is the brother of **Cheikh Biyadillah**, president of the House of Councillors (Senate) of Morocco.
- CORCAS Vice-President[28] **Moussawi Khaded** is the cousin of the representative of the Polisario Front before the UN, **Mohamed Khaded** (Rguibet Weled Moussa tribe)
- **Mohammed Rguibi, member of CORCAS, is the father of the leader of Polisario Front,** Mohamed Abdel Aziz (Rguibet tribe).
- **Omar Mansour**, representative of the Polisario Front in Paris, is the cousin of the former ambassador of Morocco in Madrid (2011–2013), Ahmedou **Oueld Suilam.**

These lines of fracture within families contrast with the consolidation of the social connection between the Sahrawi living in the Sahara and the rest of the Moroccan population; In his study, Cherkaoui (2007) states that these connections excite and form a homogeneous and dense social fabric namely through the institution of marriage. This brings us back to our introductory questions for this study: the compatibility of certain universal rules in the case at hand: Western Sahara? Are the criteria established for the organisation of the referendum in the early 1990s compatible with the current sociological reality of the Sahrawi?

2.3. Autonomy as Expression of Equitable Self-determination?

In our opinion, expanded autonomy remains the reasonable and equitable path towards a sustainable solution that ensures stability in the Maghreb. It is also for this reason that the project of autonomy has found a favourable echo in the international political and legal discourse. At the political level, the States affected by this conflict and by the Maghreb region, in this case Spain, France and the United States of America, consider the Moroccan proposition as a credible road map as it respects the principle of self-determination. At the legal and multilateral level, the Resolutions of the Security Council 1754, 1783 (2007) and Resolution 1813 of April 2008, as well as Resolution 1920 of 30 April 2010, consider the Moroccan proposal a constructive basis for negotiation to arrive at a negotiated solution between the parties. Finally, it should be noted that the former Personal Envoy of the United Nations Secretary General, Mr. Peter van Walsum, has affirmed that "independence of Western Sahara is not a realistic option", calling on the members of the Security Council to recommend the continuation of negotiations taking into account the political reality and international law.

It remains to be seen whether the contents of the Moroccan project comply with the requirements and the values of equity. This compatibility will be analysed through three key concepts, namely legitimacy, justice and equality.

From the point of view of legitimacy, the project combines two fundamental principles of International Law, these being the principle of self-determination and the principle of the territorial integrity of States. On this matter, section 27 of the project provides that "*the autonomy status of the region will be the subject of negotiations and will be subject to a free referendum of the people concerned. The referendum represents, in conformity with international law, the UN charter, and the resolutions of the GA and the SC, the free exercise of their right to self-determination by the people*".

Regarding the concept of justice, in this case, in the case of autonomy, it must be understood that the initiative, namely through section

12, will allow the Saharawi population to manage its local affairs itself both at the administrative level (including local police and local jurisdiction) and the financial, tax, social, infrastructural and environmental levels. To this end, the region will have a Regional Parliament, a government presided by a leader who will be elected by the Regional Parliament and a Regional Superior Court. In the direction of justice, section 31 of the project provides for a general amnesty.

Regarding equality, in this case it is about the provisions to guarantee a fair distribution of wealth between regions and to establish bridges between the exclusive powers of the State and those of the region. Section 13 of the project lists the financial resources of the future autonomous region, including the part of revenues from natural resources located in the Region and collected by the State.

In this sense, the wider autonomy of the region of the Sahara is covered by the framework of the principle of equity both from the point of view of both its democratic contents and its political and geopolitical purposes. In other words, autonomy will contribute to putting an end to the conflict that affects the Maghreb through the insertion of different Sahrawi trends (the Polisario Front, unionists, the Line of Martyrdom, etc.) in a regional political process (for the Sahara) that guarantees the rights and obligations granted by the Status of autonomy within the framework of Moroccan sovereignty.

CONCLUSION

Autonomy is the political framework to support this peaceful method to settle the conflict in the Sahara. The opposite scenario is also likely in the event that the Polisario Front and Algeria refuse to make any concessions. Therefore, no one can predict exactly what path will be adopted by the antagonists nor the repercussions it will have on the stability of the Maghreb. The stiffening of political positions built on a primarily selfish viewpoint of national interests and false perceptions lead to insensible geopolitical situations such as the closure of land borders between Algeria and Morocco. The arms race, which takes place in both countries, should normally engage and mobilise all the good will of countries in Europe and elsewhere in the direction of a Moroccan-Algerian approach, only to unblock the negotiation with the purpose of arriving at a negotiated, fair and equitable solution that guarantees the dignity of the Sahrawi components and the territorial integrity of Morocco.

NOTES

1. The concept of compromise has full objective legitimacy. Therefore, the resolutions of the Security Council (April 2008, April 2013) make it a pillar in the new diplomatic approach of the United Nations in Western Sahara.
2. See the full text of the Moroccan initiative for negotiating an autonomy statute in the Sahara region http://www.corcas.com.
3. The most prominent one being Mohamed Bedjaoui who was president of the International Court of Justice and Minister of Foreign Affairs.
4. Paragraph 2 of article 1, article 55 and chapters 11, 12 and 13.
5. Martti Koskenniemi applied the theories of "*pure fact view*" and "*legal view*" to the principle of sovereignty in Koskenniemi (2007: 70).
6. See, for example, the dissenting opinion of Koretsky (1966: 166).
7. Aristotle: *Ethique à Nicomaque*, book V, § 1, 1137b. Quoted by Degan (1970: 4).
8. Idem
9. Fouad Ammoun has given, in his individual opinion, an overview of the place of equity in most large judicial systems, see ICJ, Affaires du plateau continental de la mer du Nord, 1969.
10. ICJ, Affaires du plateau continental (Tunisie/Jamahiriya arabe libyenne), 1982, p. 60, No. 71; ICJ, Affaires du plateau continental de la mer du Nord, *op. cit.*, p. 46, No. 85.
11. Ibid., p. 48, No. 88.
12. Series A/B, No. 64, quoted by Charles de Visscher (1972: 7).
13. Ibid., p. 8;
14. Intervention by Professor Quéneudec, ICJ, Compte Rendu des Audiences publiques, Délimitation en mer Noire (Roumanie/Ukraine), CR 2008/26, §69.
15. CIJ, opinion individuelle, Juge Jimenez de Arrechaga, *Tunisie/Libye,* Recall 1982, §24, p. 106
16. ibid., §72, p. 60.
17. V.D. Degan, op. cit. p. 42.
18. This notion is borrowed from R-J-Dupuy and D. Vignes (ed.), *Traité du nouveau droit de la mer*, 1985.
19. Declaration on the Granting of Independence to Colonial Countries and Peoples from 14 December 1960.
20. See www.icj-cij.org/docket/files/61/6194.pdf.
21. Resolution adopted on the basis of the report by the Commission of Special Political Questions and Decolonisation (Fourth Commission).
22. Report, S/2000/683.
23. Report of the Secretary-General, S/1990/483.

24. These problems are carefully analysed in a historical perspective by Laroui (1977).
25. S/RES/1920 (2010).
26. Benjamin Stora (2002) gives an in-depth reflection on the future of a democratic Maghreb through its regions.
27. See Report of the French Senate: "Sahel pour une approche globale" done in the name of the Commission des Affaires Étrangères, de la Défense et des Forces Armées, no. 720 (2012-201).
28. Royal Advisory Council for Saharan Affairs.

REFERENCES

Brierly, James (1944) *The Outlook for International Law*. Oxford: Oxford University Press.

Cherkaoui, Mohamed (2007) *Morocco and the Sahara: Social Bonds and Geopolitical Issues*. Oxford: The Bardwell Press.

de Visscher, Charles (1972) *De l'équité dans le règlement arbitral ou judiciaire des litiges de Droit International Public.* Paris: Éditions Pédone.

Degan, V.D. (1970) *L'Equité et le Droit International.* The Hague: Martinus Nijhoff

Falk, Richard (1969) "The interplay of Westphalia and charter conceptions of the international legal order", in R. Falk and C. Black (eds), *The Future of the International Legal Order*. Princeton, NJ: Princeton University Press, vol. I, pp. 34–35.

Good, Robert (1962) "State-building as a determinant of foreign policy in the new states", in Martin Laurence (ed.), *Neutralism and Non-alignment*. New York: Praeger, pp. 3–13.

Jouanet, Emmanuelle (2007) "A quoi sert le droit international? Le droit international providence du XXème siècle", *Revue Belge de Droit International*, 1: 5–51.

Jouve, Edmon (1978) "L'émergence d'un droit des peoples dans les relations internationales", in A. Cassese amd E. Jouve (eds), *Pour un droit des peoples*. Paris: Berger Levraut.

Kennedy, David (2009) *Nouvelles approches de droit international*. Paris: Éditions Pédone.

Klein, Pierre (2001) "Les problèmes soulevés par la référence à la 'communauté internationale' comme facteur de légitimité", in Olivier Corten and Barbara Delcourt (eds), *Droit, légitimation et politique extérieure: l'Europe et la guerre du Kosovo*. Brussels: Bruylant, pp. 261–297.

Korany, Bahgat, Noble, Paul and Brynen, Rex (1993) *The Many Faces of National Security in the Arab World*. Montreal: Macmillan.

Koretsky (1966), ICJ, Affaires du plateau continental de la mer du Nord, 1969

Koskenniemi, Martti (2007) *La politique du droit international*. Paris: Éditions Pédone.

——— (2007) "Entre utopie et apologie: la politique du droit international", in M. Koskenniemi (ed.), *La politique du droit international*. Paris: Éditions Pédone.

Lalande, André (2010) *Vocabulaire technique et critique de la Philosophie*, 8th edn. Paris: Quadrige/PUF.

Laroui, Abdallah (1977), *Les origines sociales et culturelles du nationalisme marocain*. Paris: Éditions Maspero.

Mohsen-Finan, Khadija (1998) *Sahara occidental: les enjeux d'un conflit regional*. Paris: Éditions CNRS.

——— (2006) "Inextricable, le conflit du Sahara occidental rebondit", *Le Monde Diplomatique*, no. 622.

Morin, Edgar (1990) *Introduction à la pensée complexe*. Paris, ESF Éditeur.

Olivier, Pirote (1972) "La notion d'équité dans la jurisprudence récente de la cour internationale de justice", Paris, RGDIP, volume 77, 1.

Salmon, Jean (ed.) (2001) *Dictionnaire de droit international public*. Brussels: Bruylant, AUF.

Stora, Benjamin (2002) *Algérie Maroc, histoires parallèles, destins croisés*. Paris: Éditions Maisonneuve et Larose.

Zartman, William I. (1990) *La Résolution des conflits en Afriques*. Paris: l'Harmattan.

29

GLOBAL DOMINATION OF FINANCE BEYOND PIONEERS' EXPECTATIONS

Jacques Lautman
Université Aix-Marseille

> "One of the reasons of the lack of anticipation of the economists, the central bankers and the regulators resides in unconditional admiration of financial innovation"
>
> Lord Adair Turner, President of Financial Service Authority, London

By "economic and financial world", we mean, on the one hand banks and financial mathematics in its most accomplished form, leading to the amazing *riskless investment* concept, and, on the other hand, major companies in need of investment, rating agencies and other market agents in general, such as professionals, investors, speculators, considered as a whole.[1]

We intend to highlight this unintended process of convergence which finally led to the formation of a complex nexus without any clear vision of the future, running largely on a day to day basis, with more or less convincing justification, which, in spite of being criticized and considered as dangerous by some not necessarily anti-capitalist thinkers, compelled the whole world to obey its rules. Our project is a swift essay in historical economic sociology, focused on generating mechanisms (see Cherkaoui, 2005). The gradual conjunction of five trends: a) the abandoning of Bretton Woods rules on capital movement, following Nixon's decision in 1971; b) the growing influence of ultra-liberal economic and political thought; c) advanced financial mathematics; d) increasing trade globalization; e) huge needs of liquidity, created major constraints for the governments, the firms as well as many other social changes and consequences. The mathematical connection, made by Robert Lucas in 1978, between the modelling of stock exchange dynamics and Kenneth Arrow's risk-free investor (as abstract as Maxwell's demon), was not meant for direct market intervention. It is a quite different matter for the business practices that have stemmed from the dogma of informational efficiency and from the martingales derived from the models. Under fair conditions, i.e. often, they tend to be effective, that is they allow investors to act and large companies to raise money. We will deal here neither with traders' many scandals or scams on the futures markets, nor with coordinated lobbying strategies implemented by serious financial executives. However, all things considered, the ethical aversion among sociologists for conspiratorial interpretations has been somewhat shaken.

I. UNINTENDED CONSEQUENCES OF ABANDONING BRETTON WOODS

A good starting point for a long-term view of the problem is *Fine della Finanza,* an important book of economic history by Amato and Fantacci (2009), two Italian economists, heavily influenced by Keynes. As a leading theme for a journey through the centuries, they pick the consistent trend towards more liquidity that started basically with the invention of currency. We can identify a few stages: the invention of paper money, the practice of covering national debt by public borrowing, the organization of Stock Exchanges during the 19th century and the beginning of the 20th, gold-pegged currency and an increasing craving for liquidity. Then we shall address the debt issue and since the global economy does not ever perform closure of accounts, one can say that the failure to pay back debt is consubstantial to the expansion of liquidities. The shock that paved the way to today's world is the 1971 "Suspension/

termination" of fixed exchange rates and of gold-dollar convertibility, ordered by President Nixon, that pushed the world into the unknown. In 1973, fixed exchange rates disappeared, the Bretton Woods provisions restricting international speculative movements were abandoned. Three essential distinctions were thus erased: it was no longer possible for any state to have its own daily exchange rate, independently from the international one; bank notes ceased to be credit vouchers and therefore became solely based on trust; finally, and this is probably the most serious issue, currencies were no longer instruments of sovereignty; they were turned into goods.

Nixon's decision, though disguised for political reasons, was a way of confessing his inability to maintain the parity of the dollar—the world currency—because of the extent of the American deficit; it involved a general move towards floating exchange rates. For various reasons, including the extension of the Welfare state, (specialists diverge on this issue) most major European countries have allowed their public national debt to swell. The Maastricht Treaty had fixed limits whose base was uncertain. Conversely, it is quite obvious that the national debt generated a gigantic market of interest rates on sums that do seem more or less infinite.

Thus, the importance of the stock exchange market, as established in the 19th century to deal with shares and obligations and some Government bonds, declined, ending up as almost residual, next to two other markets, namely the interest rates market and the derivatives market[2] both products attached to a so-called underlying security which make it possible to split the risk and to operate quietly in the red. However the first one only is open to the decisions of private individuals and it is the only one that could serve as a basis to the assertion that in parallel with the emergence of political democracy, capitalism gradually enhances the formation of a democratic group of property owners (however unequal they may be). Professionals only operate on derivatives and interest markets. Slightly later, American and to a lesser extent British pension funds became major investors in search of high yield investments. These were in no way afraid of speculative movements using their contributors' money; the funds therefore contributed to increasing the instability of corporate shareholding for the benefit of the most daring operators.

The 1981 deregulation stemmed from an old tradition and confirmed the joint victory of the Anglo-American and English banking lobby (see Major, 2014) and of a major ideological activism,[3] both recently revealed by scholarly work. As early as 1944, at the Bretton Woods Conference, Keynes, who served as a negotiator for the British government, was unable to gain the formal recognition of the duty for Governments to cooperate so that capital movement regulation should be implemented. The influential Wall Street bankers had made their point by defending the right to the free use of assets for all (see Helleiner, 2009). In 1957 a so-called parallel 'Euromarket', operating outside the rules of the official stock exchange, had opened in London. Mirowski and Plehve (2009) recall that Mont Pelerin, the association created by Friedrich Hayek in 1947 to promote neoliberalism, had ceased as early as 1957 to use the term "neoliberal", probably with the intention of asserting continuity, whereas the projects which were about to be realized deviated seriously from the liberal spirit. The new programme was nothing less than the construction of the institutional conditions which finally made it possible for the members of the Chicago School of economics to take the lead in decision making. For sure, the Mont Pelerin economists simultaneously defended three causes: the supremacy of the extreme anti state version of doctrinal liberalism as formulated by Hayek, the rejection of Keynes' emphasis on the priority of employment and business investment and finally the protection of most direct interests on behalf of bankers and their cronies. It is however doubtful that they had the faintest notion of the future of financial markets and it is a safe bet to think that some of the partisans of the minimal State would not defend current financial techniques which stem from the conjunction of advanced financial mathematics and sophisticated innovations in computer science to design and operate models and eliminate time and space from the life of the markets. Floating exchange rates induced uncertainties that lead investment banks and stockbrokers to invent new sources of liquidity.

II. WHEN MATHEMATICAL INNOVATIONS REQUIRE MARKETS TO OBEY

The dogma of the informational effectiveness of the market need not have dominated the world, as shown by Cartapanis and Herland (2002). Other ways of adjusting to the general globalization of trade and to the dazzling expansion in telecommunications might have been designed. The failure of the USSR, obvious since 1972,[4] undoubtedly played a minor role in the rise in power of the mathematized neoclassical economics and in the near impossibility for Keynesian or neo-institutionalist economists to take part in decision-making within the major international and European institutions.

We would argue here that the constant demand for more liquidity to support growth, conveyed by bankers to the governing bodies received an intellectual base, thanks to the patient work of Chicago School economists, Milton Friedman, George Stigler, more or less prone to privilege currency over economic growth and largely indifferent to inequalities of various kind. However there were also major achievements in financial mathematics dating from the 1970s simultaneously with the first oil crisis, and a craze for deregulation with two widely accepted (though poorly grounded) arguments by decision makers in international circles: a) that liberalization of all capital movements, far from opening the door to the race for immediate speculative profits, as predicted by Keynes, would be favourable to international trade; and b) that markets are able to ensure the stability and control of imbalances better than any set of national or international rules.[5] However the practice of floating exchange rates has induced uncertainties that led investment banks and stockbrokers to design tools that massively create liquidities, which no one could have imagined ten years earlier. Globally, over the last ten years, financial volumes were multiplied by a 5 to 10 factor. Market activities have taken on an increasing autonomy compared to the saving of production and services.

Liquidities, which were the major concern for bankers, became a leading element of all stock market activities and far beyond. Financial mathematics gained such a prominence that we cannot resist the temptation to describe roughly, using common terms, the upheaval it caused, not only for stock-brokers but also for corporations and larger circles. In parallel we need to account for the new corporate accounting rules, compatible with stock exchange models. In fact the two processes largely went hand in hand. A side effect is the role played by the major rating agencies. Finally, one cannot ignore the profound transformation of banking habits.

The most striking aspect is the increasing power, from the 1980s on, of financial mathematics that had achieved, in the past decade, a considerable scholarly and theoretical development. Let us attempt to provide a very simplified overview of the process, drawing largely on outstanding work by Christian Walter (2012, 2013). The starting point was the security assessment of an asset using an arbitration equation i.e. the evaluation modulo a risk factor, of the current estimated value at a future date $t + 1$ determined by the assessment mode. The current day exchange rate will become a tightly controlled product of a set of techniques that shape the exchange process. Previously, it was widely believed that the market was able to reveal the price *ex post*. However the novelty is that informational efficiency has become the standard to which the market is requested to submit. It is supposed to confirm that all information is conveyed by prices, which reflect anticipations. An important step was taken with the introduction of arbitration-completed stock arbitrage, a situation that does not leave any opportunity to make a fair negotiation, i.e. giving no advantage to either the seller or the buyer.

This condition is the basis for the idea of martingale. Since 1980, all formalizations of stock market movements use martingale-based probabilistic representations. In other words, the formal rules of financial mathematics are in no way a model based on empirical observations; they impose a future supposed to keep them away from trouble. We must admit that these constraints are most of the time effective, otherwise banks would not derive a large share of their profits from the operations they perform for their own sake on the market. The price is supposed to pre-exist and it must be revealed in the *ex ante* calculation. Christian Walter wrote: *"From caused, informational efficiency becomes causing."* However, this assumption cannot be directly tested, since there is no possible control, at time *t*. Only changes in the results of companies under review will permit to assess in $t + 1$ if the price in *t* was a fair evaluation. Here we see, and this point will be further developed, that the traditional accounting techniques are undermined. The relationship between expected return and expected yield level is defined by the discount rate. To each discount rate corresponds a specific balance equation, or martingale, in which neither of the two players, seller or buyer, is advantaged over another. To complete the calculation, we need auxiliary hypotheses that are widely based on the future: the modelling of assessment techniques in relation with accounting conventions, the modelling of stock market fluctuations and much less visible at present, volatility and risk premium. All elements which were gradually introduced in a formalization process towards a theoretical loop achieved by Robert Lucas in 1978, elegantly compatible with the Arrow Debreu general equilibrium model. On that base, some formalization fans were clever enough to design normative technical rules that ensure that professionals' expectations should gain a self-fulfilling virtue.

The connection between market value assessment and Arrow-Debreu general equilibrium was achieved by shifting from market data to a dual universe where players are equally unresponsive to chances of winning or to the risk of losing and where consequently discount does not include any risk-taking (see Chenghu, 2011). Riskless investment is a parameter of the general equilibrium model that was designed by economists totally unaware that it would one day become a regulator for market trading.

However it is worth mentioning that this highly abstract construction serves as a basis for IAS valuation standards, as adopted under the European Union Directive "Financial Markets and Instruments of the EU": "The fair value of an asset is the mathematical expectation of its future value in the dual world, discounted at a discount rate without risk premium." Walter thus summarizes: "Three different, separate intellectual worlds—that is the world of financial analysts, that of statisticians or actuaries, and that of experts in economic theory—came together; the accounting assessment of firms and equity assets, the modelling of market dynamics, and the connection to the theory of general equilibrium."[6] In this ideal or perfect world, the market is complete, fully arbitrated and optimal, in the Paretian sense of the term.

Empirical reality failed to comply with models, thus inviting economists further to investigate the rational expectations theory; at this date, no consensus emerged, even among neoclassical economists of various persuasions. A major limitation is that the representation of uncertainty in the models of market dynamics in use is mostly of a Brownian type: this seems to be the inescapable consequence of the quest for a riskless rate, unless this creed is a by-product of widespread and constant intellectual laziness.

As early as 1973, Paul Samuelson had shown that the more stakeholders are experienced, well informed and know how to reason, the less the expected value will be dependent on past trends, making stock market movements appear more erratic. There was no contradiction between "rational" assessment by actors and apparently random evolution of the Stock market, on the contrary, which undermines the widely shared premise: the best prediction of tomorrow's price is the current price. Aggregation of individual rationalities produces an overall effect of stock market prices de-correlation and thus a seemingly incoherent evolution of the index that statisticians had failed to interpret correctly. For his part, the mathematician Benoit Mandelbrot, father of the fractal decomposition method, had established that there is little reason to take market uncertainty as random. The trend of stock market prices may be rough or chaotic without being random, as evidenced by cyclical situations.

Since the mid-1990s, the derivatives market is several times larger than the regular stock market. It makes it possible to perform transactions on non-covered securities. Orders are issued by traders or by an army of computers programmed so that most orders can be cancelled in a few seconds. The most widely used equation in this mathematical modelling is the so-called "Black Scholes Merton" equation, designed to give an estimate of the price of an option by including the volatility of the underlying security. It is also used in reverse to estimate the margins of volatility. Application conditions (completed stock arbitration, interest rates without risk premium etc.) are, by far, never actually met on the market. As a consequence, its large-scale implementation is a self-fulfilling violence and computing predictions become reality. Its success is due to the fact that, despite its unrealistic basis, it is supposed to help quantify risk, and to create financial products that split the risk into smaller units.

It is worth trying to clarify the self-fulfilling dimension of financial tools by comparing them to the standard four forces model of physics, from which scientists derive expectations that can equally be considered as self-fulfilling, in that sense that their empirical consequences cannot be revealed without the support of a huge technical and scientific experimental equipment. It may happen that, previously to any scientific experiment, some theoretical assumption need be introduced (Higgs particle). The world of physics is still further apart from tangible reality than the world of traders, but it is a closed one, which makes a fundamental difference. There are no external or disruptive events with extremely low but non-null probability. Conversely the market is not a closed world. Furthermore, the models used by finance are crude compared with those of mathematical physics.

There results a consequence of primary importance, not intuitively obvious to the layman: in an informationally efficient market AOA,[7] the mathematical expectation of gain is zero. In order to attempt to do better than the index, which is the goal of any trader, you must be in a position to commit insider trading, to operate facing a bunch of incompetents, to be able to withstand the common view, like a George Soros or a Warren Buffett or, more commonly, to practice games of agreement and tit for tat with so-called brilliant traders. The manipulation of Libor, a base rate for interbank loans, showed the peaks that bold misdemeanour could reach.

III. SHORT-TERMISM EVERYWHERE

Without our addressing technical issues, the recent history of accounting for listed companies[8] must be viewed in relation with the evolution of financial techniques.

The market value of the day has become the fair accounting value, whereas previous practice was to record the sum of assets minus liabilities. As a consequence, the record of the past price has to be connected with the assessment of the current price as defined by the stock market. Moreover, under the aegis of rating agencies, the market value of the day has become decisive for prospective assessments of hazardous future profits recorded in the accounts. In the previous system, the gap between book value and market price was viewed as normal, whereas in the new system, they must be explained by disruptive elements, either rational or irrational.

Otherwise it must be eliminated; this latter solution was chosen *de facto*.

Thus the accounting system adjusted to IFRS standards is supposed to match past, present and future data. This weird construction designed by a private Anglo-American lobby between 1985 and 1992 was declared mandatory in the EU by a 2002 Brussels directive. Incomprehensible and, as such, less and less widely used as a reliable source by professionals, after ten years and a succession of crises, at present it is subject to a revision process, aiming in principle at making it more transparent and less useful for the supporters of opacity. Meanwhile, it has experienced two major influences: a) the expansion of rating agencies; b) general instability among companies exposed to hostile takeovers or compelled to grow at any price, process involving effects that may be financially positive for some time, without any benefit for the real economy.

Risk analysis is carried out by the agencies using a 5-point checklist: identify risks; prioritize; assess likelihood; define one or several avoidance strategies; and compare the costs under different assumptions of probability. Here we are in the real world. The contribution of the analyst consists mainly in calculating the probabilities of various risks under a limited number of subsidiary assumptions. To this end, he needs information that only the companies under review may provide. But business leaders are perfectly aware of the damage a reduction in their might cause to their ability to raise funds. Therefore, because of the supposedly rational constraints of the system, businesses tend to underrate the predictable risks of their projects, claiming they are perfectly safe. As to the rating agency, it knows the impact of a downgrading on the market and its highly predictable consequence on the capacity and cost of financing for the victim. Hence, the temptation even perhaps the obligation to lie and to apologize whenever the worst scenario finally occurs. Enron was until its final fall, largely overrated by analysts who knew the situation but did not want to be held responsible for having caused bankruptcy.

The concatenation has been clearly shown by Alexandra Ouroussoff (2009). Conflict is inherent to the relationship between entrepreneurs and rating agencies since the leading principle of the external auditor is to obtain a maximum of information by threatening the organization under review of various ills: downgrading, falling stock prices, declining investment, funding difficulties. This is the way agencies are able to "negotiate" (sic) access to highly confidential corporate data. The growing intervention of major rating agencies reveals a shift in capitalism. The major competitive factors (Quality, Price, Innovation) now fall far behind the construction and maintenance of strategies to regulate and, if possible, eliminate the risks associated with unknown elements not included in the sectorial forecast models. The conclusion of the audit is no longer a probabilistic assessment but an assessment of the robustness of a strategy designed to outlaw chance. We may say that rating agencies are partly responsible for designing large corporations' strategies. Consistently by advocating more concentration, supposedly to ensure financial strength, they undermine competition which is viewed by most Nation States and the European Union as the basic principle of capitalism they want to protect. Rating agencies do not promote competition; they contribute to its eradication.

In this new scheme, companies are bound to grow and breed capitalistic monsters. But recently a maverick, Clayton Christensen (1997), well-known author of *The innovator's dilemma*, has launched a widely broadcast crusade to expose the deadly effects of the new creed on the innovative capacity of large groups. Its purpose may be summarized in three steps. The development of a really successful innovation is expensive. Step two: CFOs basically think and act on a short-term basis, while rating agencies require a rapid return on investment and R&D. As a result, the firm holding a patent will not have time to rationalize the new production, nor the ability to devote a share of the profits to innovation.

Obviously, this development of financial capitalism, from the 1990s on, is in no way a revival of the first twentieth century entrepreneurial capitalism, as described by Alfred Chandler Jr. followed under Roosevelt by managerial capitalism, as described and praised by Galbraith, that accompanied, or favoured, the economic boom of the post war period. A major difference, but one that does not attract the attention of economists, is a change in the size and spirit of financial institutions and, more brutally, a loss of ethos. Investment banks used to be well-behaved institutions, partnerships in which bankers and attorneys were investing their own money in transactions selected with other members of the establishment, wealthy investors and heads of major companies. Personal relationships, shared ethics, supported by institutional rules represented limits to misbehaviour, to the temptation inevitably involved by the handling of money. At that time Goldman Sachs dubbed "billionaire boy scout" was not highly respected in the Club. Irregulars were generally swiftly outlawed.

All this is history. Safeguards have disappeared for the sake of deregulation; the explosion of business and speculation moves have led to enrolment growth, transition to public limited liability companies, the disappearance of absolute honesty toward the customer. The few traders who get caught are just a tip of the iceberg. Even banks open to the general public encourage their staff to stuff their clients with the most profitable papers for the bank. Why then should we be surprised that Goldman Sachs has led small German banks of the Rhineland to place so-called "structured products", made from non-recoverable loans on over-indebted Americans?

IV. IMPOSSIBLE COEXISTENCE OF MARKETS DOMINANCE, SOVEREIGN STATES AND DEMOCRACY

Let us now face a fascinating contrast that very few observers have pointed at or analysed so far: in recent years, NGOs have produced a mass of reports, and launched demonstrations to address environmental issues such as nuclear energy, the dissemination of radioactivity, global warming, species extinction, etc. In comparison, the quantity of information and protest to broadcast and oppose the consequences of international finance is relatively limited (see McNally, 2010). One could argue that this is due to the highly technical nature of mathematical finance. However, tackling nuclear energy issues requires at least as much scientific knowledge as financial analysis. High rank nuclear physicists have repeatedly protested against the expansion of nuclear energy for civil or military ends. They reach the general public; their arguments are widely disseminated, discussed and partly implemented in risk prevention programs.

Until recently, no similar movement could be traced among economists, although some Nobel Award winners have attracted a somewhat larger audience, after the 2008 crisis of the global banking system. For some time, many private banks were forced to rely on national treasuries and central banks. There was much debate about the major reforms to be implemented; a more severe equity-to-total-assets ratio was meant to guarantee financial security and to ensure a better regulation of the financial market, but the very sophisticated norms Bâle III are not significantly better and the international coordination faces a reduction; each country being responsible for its banks. Two years later, it was clear that the reforms would be fairly modest and that the players' practice was bound to remain very much as before. One of the major reforms is that banks are no longer allowed to speculate on sovereign debt on their own account; however, apart from banks, there exist other organizations, that are not subject to these restrictions. The displacement effect is quite as conspicuous as that of drug dealers and their clients after a police raid on a neighbourhood.

In his recent book, Edmund Phelps (2013), a Chicago School monetarist for a long time, contends that in recent decades the desire for innovation, which had been the motor of the modern economy from 1820 till 1970, dramatically declined in the American culture at the expense of real economy. He mentions three main causes. The first and most visible one is the structural fault of the multinational companies that prefer short-term profit and neglect R & D investments, but, at closer inspection, the second and most important cause is the craving for cash as the leading strategic principle. Thirdly, excessively close links between big business and politics deadly threaten democratic governments, unable to maintain the common good as a primary goal of their action.

Dani Rodrik, a dissident economist, but who remains true to the neoclassical methodological framework asked in 2008 "if there is evidence that financial innovation has made our lives unambiguously better".[9] In his last book (see Rodrik, 2011), he contends that deregulation and globalization have made it impossible for markets, sovereign states and democracy to coexist. Markets are no longer able to maintain stability; national regulators' networks have repeatedly failed to predict reversal cycles and propose timely contra-cyclical measures; ultimately, the responsibility to pursue macro-economic objectives fell into the hands of states, at the expense of the real economy of producers, consumers and taxpayers; however, banks "too big to fail", survived. For sure, the benefit of free trade has long been a success as it has been and should still be the case for the free movement of capital. To the contrary, frantic deregulation and globalization have led to general instability, national debts, rising inequalities, loss of public confidence in democratic weakened institutions, more or less surrendering to private interests, paying no attention to the common good. According to Rodrick, since there is no hope to rebuild a general system similar to Bretton Woods, we can expect only limited sectorial improvement from G20 meetings, assuming this group would be concerned with implementing its recommendations … This is not a very appealing perspective.

Finance Watch, a non-profit organization based in Brussels, was launched in 2011, thanks to the initiative of a French Green MP, Pascal Canfin, with some economic support from the European Union. The leaders are a few former players in the financial markets. At the beginning they were fewer than a dozen; they were competent, having left the world of finance for intellectual and moral reasons, because they were convinced that stock and money markets in their present state increase inequalities between nations and at the national level, and far from contributing to general welfare, produce severe detrimental effects. Obviously, a very limited circle of powerful actors, bankers, their traders and shareholders holding the first rank monopolizes huge profits of the system and acts as a lobby against any reform. However Finance Watchers are not utopian and they do not oppose the existence and the necessity of credits, loans and money exchange. Presently, they try to counter the international media campaign and action of the banking lobby against the Likannen report, commissioned by the European Commission, which advocates a return to a more strict separation between banking speculative activities and bank deposits and loans to businesses and individuals.[10]

At first, protesters against global warming were mostly highly educated people. As time went on, an increasing part of the population in developed countries became involved in these issues, supported by several influential media. Can we imagine that the same could happen to the opposition to banking capitalism today? Why would not the demand of a financial world more open to the needs of real economy be as motivating as the concern to avert the degradation of atmosphere surrounding the earth? It is likely that a crucial difference between the two is that in the case of the risk of global warning, most people know the danger is equal for all human beings, which is not the case at all in the world of money and finance. Most opinion surveys reveal that citizens are in favour of equality but accept a hierarchy of remunerations as fair; they largely underestimate the scale of the assets as well as the sums involved in speculation. Moreover, the educated classes know that the world we live in needs finance and that firms need credit. However, it is striking to find in the words of economists working for rating agencies traces of a fear of a financial Apocalypse, echoing the speeches delivered by the most inflamed Earthwatch Institute fans.

We might conclude first by pointing to heavy determinants, chain effects of the abandon of the Bretton Woods provisions, of the rise in government indebtedness and the consequences of the explosion of computerized facilities. Wolfgang Streeck (2008) contends that since WW2, the West, under the leadership of the U.S. used successively three technic at reducing the tension between markets and general well being, at first inflation, then public debts, lastly private debts. Each one worked for a while but now we are in doldrums. This smart synthesis supposes a large forecasting ability and voluntarism from part of the governments. One might also focus on the conjunctions of decisions (see Cherkaoui, 2000) that can be reported to individuals or to small groups. Let us mention: for theory, Hayek and his circle, the Mont Pélerin association and the Chicago School, for propaganda, Milton Friedman, a President of the United States, Ronald Reagan, a small cohort of finance mathematicians, bankers, flirting sometimes with megalomania, policymakers too close to the bankers in the U.S. All together they contributed to design a world where major profits are created more by speculation than by the real economy, where national governments are dominated by money and derivatives markets for lack of finding a path promoting the well-being of all; crises harm the poor in the North and do worst in the South. At the level of productive or service enterprises, it generates a deadly obsession with the elimination of both risk and competition … which was believed to be the basis of capitalist dynamism.

Laurence Fontaine (2014), Adam Smith's great admirer, recently wrote "dans notre quête historique depuis le Moyen Age, nous avons buté contre les appropriations privées du marché par les plus gros et les puissants, alors que tout concourt à faire du libre accès au marché un pilier de l'existence de citoyens reconnus dans leur égale dignité. … Refonder les liens entre économie et politique et faire rentrer l'économie au sein des Biens communs sont les seuls moyens pour surmonter les blocages d'un monde où les entités politiques sont circonscrites mais les marchés globalisés". Strong praise of the market where evaluations are grounded in things and actions and not on inequality of social power of actors or agents goes along with deep pessimism concerning the present time where political authorities surrender to the blind global forces of the financial markets and their unintended devastating and long lasting effects every where on the earth.

NOTES

1. The draft of this paper had been written in French. I express my deepest heartfelt gratitude to Laurence Coutrot and Jane Saint Sernin for comments, improvements and translation.
2. Derivatives market amount in 2006 to: 450,000 billion US$; Shares market: 40,000 billions; Obligations 65,000.
3. In particular thanks to the influential Mont Pelerin Society (see Djelic and Quack, 2011).
4. At that date, the rural population ceased decreasing in the USSR.
5. Thanks to the 2008 crisis, well grounded criticisms become slightly more visible (see Scialom 2012)
6. Walter (2012) *op. cit.*, p. 20.
7. AOA means arbitrage opportunity absence.
8. This is well analysed in Aglietta and Rebérioux (2004).
9. Quoted in "Too much finance" by Arcand J.L., Berkes E., Panizza U. VOX EU 2011 April
10. See "Structural reform to refocus banks in the real economy", Report issued by Finance Watch 2014, July.

REFERENCES

Aglietta, Michel and Rebérioux, Antoine (2004) *Les dérives du capitalisme financier*. Paris: Albin Michel

Amato, Massimo and Fantacci, Luca (2009) *Fine della Finanza*. Rome: Donzelli; English translation, *The End of Finance*. Cambridge: Polity Press, 2012.

Cartapanis, André and Herland, Michel (1997) "The reconstruction of the international financial architecture: Keynes' revenge?", *Review of International Political Economy* 9(2): 257–283.

Chenghu, Ma (2011) *Advanced Asset Pricing Theory*. Singapore: World Scientific Publishing Company.

Cherkaoui, Mohamed (2005) *Invisibles Codes*: *Essays on Generative Mechanisms.* Oxford: Bardwell Press

——— (2000) "La stratégie des mécanismes générateurs comme logique d'explication", in *L'acteur et ses raisons: Mélanges en l'honneur de Raymond Boudon*. Paris: PUF.

Christensen, Clayton (1997) *The Innovator's Dilemma. When New Technologies Cause Great Firms to Fail.* Cambridge, MA: Harvard University Press.

Djelic, Marie-Laure and Quack, Sigrid (2011) *Transnational Communities*. Cambridge: Cambridge University Press.

Fontaine, Laurence (2014) *Le marché*. Paris: Gallimard.

Helleiner, Eric (2001) *States and the Reemergence of Global Finance.* Ithaca: Cornell University Press.

Major, Aaron (2014) *Architects of Austerity*. Stanford, CA: Stanford University Press,

Mirowski, Philip and Plehve, Dieter (2009) *The Road from Mont Pelerin*. Cambridge, MA: Harvard University Press.

McNally, David (2010) *Global Slump: The Economics and Politics of Crisis and Resistance.* Oakland, CA: PM Press.

Ouroussoff, Alexandra (2013) *Triple A: Une anthropologue dans les agences de notation*. Paris: Belin.

Phelps, Edmund (2013) *Mass Flourishing: How Grassroots Innovation Created jobs, Challenge and Change.* Princeton, NJ: Princeton University Press.

Rodrik, Dani (2011) *The Globalization Paradox Democracy and the Future of World Economy.* New York: WW Norton.

Streeck, Wolfgang (2008) "Flexible markets", Cologne: MPIG Working paper 2008/6.

——— (2013) *Politics in the Age of Austerity*. New York: Polity.

Scialom, Laurence (2012) "Trop de finance tue la croissance", *Le nouvel économiste.fr* 27 Nov.

Walter, Christian (2012) "La martingalisation des marchés comme convention stochastique", Séminaire Conventions Université Paris-Ouest Nanterre.

——— (2013) *Le modèle de marché au hasard en finance.* Paris: Economica.

PART SEVEN

Social Movements

30

TERRORISM AND RATIONALITY

Gerald Bronner
University of Paris-Diderot—LIED (UMR CNRS)

In his book *Good Intentions: Max Weber and the Paradox of Unintended Consequences* (2007), Mohamed Cherkaoui proposes to examine the mechanisms that produce Islamic fundamentalism. He noted (181) that unemployment, poverty and lack of education are not the main factors which could explain terrorism. Such explanations (poverty, lack of education) are often forthcoming from commentators of all kinds,[1] though it has to be admitted that they are more commonly expressed by journalists than scholars. Those who have studied this issue in depth are well aware, as Cherkaoui, that the hypothesis linking extremism with lack of education and low social status is quite simply wrong. The idea is wrong as well for terrorist movements such as IRA, the Red Brigades, Baader band, the Japanese Red Army or perpetrators of the terrorist attacks of 09/11.

Mohamed Atta, for example, the bomber who crashed the American Airlines 11 flight into the first tower of the World Trade Center ironically had a PhD in architectural restoration of historic districts.

The same observation can be made about the perpetrators of the attack in London in July 2005 or the members of the Islamic cell in Montpellier, disbanded in March 2006, and composed of French students of Moroccan origin from affluent families, sometimes of mixed origin, who were studying engineering at the University of Science and Technology of Languedoc (Montpellier II). Broadly speaking, a large majority of the perpetrators of attacks have advanced degrees and come from the wealthier social classes, as Cohen (2002) has pointed out. The analysis of Islamist terrorism alone also converges to the same diagnosis. For instance, Marc Sageman (2004) made an impressive and exhaustive study of the general characteristics of Al-Qaeda terrorists. He discovered that most of the movement's members do not come from disadvantaged or working class background. The same point was made by Etienne (2005) in his study of suicide fighters Krueger (2007) in his book *What Makes a Terrorist: Economics and the Roots of Terrorism*, Crenshaw in his article: "The cause of terrorism" and Ruby (2002) in a text in which he wonders, "Are terrorists mentally deranged?"

Most often, therefore, the extremists are individuals who are in full possession of their intellectual capacities. So how can they endorse such unreasonable beliefs? Another type of explanation has been put forward namely that those who are guilty of moral abominations (as in the case of terrorism) would suffer from a kind of eclipse of moral convictions.[2]

1. EXTREMISM IS NOT AN ECLIPSE OF MORAL CONVICTIONS

The story of Phineas Gage is well known to all who are interested in the human brain and how it functions. On the 13th of September 1843, this employee was working on the construction of railways in Vermont, United States. His task was delicate and involved the use of explosives and on that day, things went badly wrong. An unexpected explosion projected a 6 kilogram steel bar through his head. To be more specific, this bar was 3.6 centimetres in diameter and 1.1 meters in length, it entered through his cheek, destroying part of his upper jaw, passed under his left eye and came out through the top of the skull. The most surprising part of the whole story is that he survived this terrible accident. It took him a long time to recover of course but doctors who examined him maintained that by the spring of 1849, he had recovered all his physical and intellectual capacities. Indeed, by as early as November

1848, he was walking normally and claimed to have no more headaches. He had lost the use of his left eye and suffered facial paralysis, but that seemed acceptable considering the terrible trauma he had suffered. This story could almost be considered miraculous if things hadn't ultimately gone wrong. Phineas Gage was back to normal except for one detail: his friends didn't recognize him. He had previously always been a competent, affable and courteous man but now he had become rude, aggressive, arrogant and violent, in a word, uncontrollable. His friends said that after his accident Phineas Gage was no longer Phineas Gage. He seemed to have no remorse regarding his abusive behaviour all of which led his employer to fire him. Legend has it that he ended up performing in street fairs and eventually died in poverty.

Gage's change in attitude occurred shortly after his terrible accident and because neuroscientists[3] were able, through analysis of his skull, to identify areas where the brain had been damaged, it is fairly safe to assume that the amorality of Mr. Gage was something like an *eclipse of moral convictions*. Phineas Gage lost the ability to discern between a certain standard of good and evil. In such cases, it is also fair to conclude that the individual concerned is not morally responsible for his acts because the accident he suffered clearly changed his personality. His behaviour can be explained by biological causes. Therefore, his capacities to make a *retro-judgment* (i.e. the ability to reverse initial reasoning and to replace it with a different system of reasons, here in the field of good and evil) have been considerably weakened.

Individuals who have espoused terrorism are generally not in the same situation as Gage. From what we know of them, their brains are not physically damaged and we cannot even make the costly assumption that their primary socialization may have made them automats of barbarity because many became fanatics rather late in their lives.[4]

You don't need a wild imagination to assume that, leaving aside their ideology, they are able to resent all kinds of things that would also make the ordinary man in the street indignant too. Obviously, if we could assume they lack any sense of morality, the fundamental conundrum that I wish to address here could be solved quite simply i.e. they would be capable of committing heinous acts because they wouldn't be able to understand how and why those acts are evil. The question of how they can accept to sacrifice their most precious interests (career, comfort, personal life and life itself) to their cause would remains unanswered, but at least, the immorality of their acts wouldn't remain a mystery. In the present case, the solution of the amorality of the perpetrators allows us to intellectually report acts which appear incomprehensible because the consequences of those acts are morally offensive. Moreover, when faced with abject acts, the hypothesis of the amorality of those who produce it is often convenient. As observers, it allows us not to remain uninvolved because when we're dehumanizing such acts, we conveniently ignore the possibility that they could be a mirror of our darkest sides.

The studies that I mentioned above show that the terrorist is in no way amoral. On the contrary, he is extremely sensitive to what he perceives as injustice. These feelings inspire him to cross the line. This sensitivity allows him to violate the rules of ordinary morality because he considers that superior rules exist. That's what, for instance *The Manual recruitment of Al Qaeda* (2007: 56–57) summarizes well: "One of the main characteristics of Mujahedin is that they didn't admit the laws or the red lines. All lines of Mujahedin were green."

Whether terrorists come from the extreme left, extreme right or from a background of religious inspiration, what is remarkable is not a form of moral insensitivity, but rather an exaggerated sensitivity. A sensitivity so deep that it appears that there is no possible comparison or compensation in the mind of the determined extremist. We must attempt to define this mental incommensurability because it is the first step towards solving the enigma of terrorism.

What kind of beliefs can inspire such infinite sacrifice?

Before proposing a solution to this paradox, we must first clearly define the issue at hand by reiterating certain obvious points about intra-individual competition, i.e. mental commensurability, a reality that everyone can apprehend more easily.

2. INTRA-INDIVIDUAL COMPETITION

In October 2008, after months of a bitter debate, the members of the Indonesian parliament took a crucial decision for the country. This decision was not easy to make but the members of Parliament of the largest Muslim country in the world believed they were right to reject, by majority vote, the prohibition of bikinis on beaches in the country's seaside resorts. Despite religious intransigence in Indonesia and the fact that wearing such garments is strictly contrary to Islamic rules, the deputies considered that the five billion dollars generated by the tourism industry in their country could not be endangered by a legal provision, even if it demonstrated a strong adhesion to shared values. The obvious conclusion of this political story is that the majority of MPs who chose not to make sure their country did not lose the windfall of tourism profits didn't unconditionally believe in religious dogma. This majority believed in it up to the point where superior interests were involved for the country.

Another conclusion would be that even in very special circumstances, values and interests can compete in a hostile fashion. When interests become too strong, moral values sometimes have to take the back seat. The fact that a debate (by parliament) and some hesitation occurred shows that values and interests are often *commensurate*.

The balance between interests and values is a common phenomenon (often called "corruption" in socially reprehensible situations). For example, a young man who is reluctant to give up his seat on a bus to an older person because he's tired despite being generally in favour of the idea that a young man should give up his seat to an old lady. Having spent the previous night dancing, say, may well make him reluctant to actually do so. Usually, he would perhaps not hesitate but in this case the cost of abandoning his seat seems prohibitive. Interest and values compete in his mind.

The wide acceptance of corruption as an equilibrium between values and interests doesn't cover all situations of intra-individual cognitive competition. Sometimes, indeed, we are confronted with a moral dilemma (i.e. a competition between two values). Tragedies often stage such intra-individual conflicts although there is no need to delve into the works of Corneille, Shakespeare and Sophocles to find such situations. They are quite mundane. Suppose, for example, that you are a witness to the infidelity of a couple. What should you do? Should you keep the secret for the tranquillity of this couple? Or, conversely do you tell the truth? In this case, the choice may be very different depending on the individual concerned. It is a compounded decision, but still indicates a form of balance of power between the two values in competition. The decision will reveal a part of the hierarchy of values of the person faced with the dilemma. In contrast, some situations of competition between values would not lead us to hesitate so much before deciding. Nobody would argue, for instance, that a hero hiding Jews during World War II, was not respecting the principle of truth because he lied to the Gestapo. Of course, he lied, but this does not imply that he believed that lying is good, broadly speaking. He adheres much more unconditionally to another value: saving innocent lives. In the present situation, respect for truth and respect for life compete and thus it doesn't take much time to choose the latter. To give a brief response to this section's introduction, I would like to emphasize that if this person transgresses a value without hesitation (lying is bad) it is not because, suddenly, he is victim of a form of moral blindness. The speed of his decision only indicates a form of incommensurability between the two values involved in the situation.

The unconditional adhesion to certain values involves a form of mental incommensurability which makes the expression of retro-judgments and therefore temperance in action, very difficult (but not impossible). The terrorist has no monopoly on the unconditional adhesion to certain values since we are all sometimes led to adhere unconditionally to certain values. But in this case, the man in the street unconditionally adheres to values that don't require a great deal of sacrifice to be defended. As these values are the foundation of social life, they can be applied unconditionally without damaging the collective well-being. Joe Public may be an extremist but his radicalism is most often invisible because it "converges" with the radicalism of other people like him and thus helps to form a social order. Being grounded in more transsubjective[5] values (the condemnation of slavery for instance) the man in the street's radicalism isn't of the same kind as the terrorist's.[6] However, the study of radical axiological beliefs, including those held by "ordinary" people, allows us to understand some of the fundamental mechanisms that inform the kind of sacrifices of which terrorists are capable and guilty.

3. PRESENTATION OF THE PARADOX OF INCOMMENSURABILITY

As seen in the previous examples, the commensurability between interests and values is commonplace in human thought processes. This regular corruptibility of the human mind could lead us to believe that there is something like a proportional relation between values and interests. Provided the price offered is high enough, any mind could be corrupted because there would be commensurability between these two spheres. In other words, there would always be an offer sufficient to convince an individual to do something he morally condemns. I believe it is easy to show just how and why this is in fact false. When, for example, a terrorist is able to abandon his own life to serve an idea, he quite clearly demonstrates, that there are levels of axiological adhesion which allow no comparison between values and interests (including one who acts without any hope of being rewarded for his act by being admitted to a *post-mortem* paradise for instance[7]).

Most Westerners, for example, radically condemn slavery, expressing an unconditional idea and meaning that they wouldn't accept any argument supporting this practice. They would never accept the return of human trafficking even if they can easily understand the economic arguments for this occurring. Thus, the economic argument has long been used to justify this practice (sometimes regretting that it was necessary), but today, these arguments seem preposterous and unthinkable. Why? Because we now unconditionally approve of the idea of an essential equality of human beings that makes this practice heinous. So heinous that it doesn't seem acceptable, *whatever the cost*.

This example shows that, at a certain intensity of belief, there is an incomparability, even incommensurability, between values and interests. Whatever possible positive sides the practice of slavery may have, we will always condemn it. Another example could be that whatever the amount of money proposed, even for a colossal fortune, even for all the imaginable material gains in the world, most of us would not agree to assassinate an innocent. The principle of incommensurability may even be exacerbated by adding the factor that the innocent is a child.

Why, in many circumstances, is there an effective commensurability between interests and values and in others not? Corruption usually reveals that there is something like a mental common *unit* between values and interests (otherwise no mind could balance both), but if this unit exists, there would always be a level of possible corruption provided that the "corruptor" pays the right price. This last finding indicates a strong paradox that I propose to name the *paradox of mental incommensurability.*

As with many paradoxes,[8] it works on an implicit premise that contaminates our representation of the problem. Indeed, it is grounded on a false assumption about mental dynamics. It affirms a form of simple proportionality between assessed values and interests. I have tested it by an experiment presented below and which was conducted on "ordinary" individuals precisely because extremists do not have a monopoly on mental incommensurability. But before presenting the results of this experiment, we must first make a detour through the history of ideas, where we shall discover the existence of another paradox which is the first step to solving our own paradox.

4. THE PARADOX OF SAINT PETERSBURG AND THE CURVE OF INTEREST

Daniel Bernoulli proposed an answer to the paradox of Saint Petersburg in 1738. It comes from the definition that Pascal suggested about the expectation of winnings in a lottery game. Pascal made this proposal in response to questions from the Knight of Méré on gambling where money is involved. Would you, for example, bet in a lottery offering a 500 euro prize with ten-to-one odds to win if the ticket costs 100 euros?

He explained that to answer this question, you have to multiply the various possible gains by the corresponding probabilities. In this case, as the calculation $500/10 = 50$ (expectation) is below the cost of entry (100 euros), Pascal would advise us to refuse to participate in the lottery on a mathematical basis. Considering this definition, Nicolas Bernoulli (Daniel's cousin), suggested a paradox known as *The Paradox of Saint Petersburg.*

We are invited to play the game of heads or tails. The game ends, according to the rules, when heads is obtained. If you get heads the first time, you win 2 Euros, if you get heads twice, 4 Euros, three times 8 and so on. If the head is obtained in the n^{th} spin of the coin, the winnings will be 2^n Euros. The question is: "How much should I agree to pay as an entrance fee to take part in this game (the amount wagered will be definitively lost)?" In other words, given the potential gains in this game, what is the most I should offer for the right to play? Most of us wouldn't wager a great amount. However if one follows the proposals of Pascal, as the mathematical expectation is infinite, we should be able to bet all we have to play.

$$\sum_{n=1}^{\infty} 2n \times \frac{1}{2^n} = +\infty$$

This paradox can be called "psycho-mathematical" because it reveals the irreconcilable differences between mathematics and ordinary thought. Admittedly, ordinary logic forbids that we follow the advice of pure mathematics, but is this in itself, as far as we can say, irrational? This would lead to a definition of rationality in which nobody would recognize themselves and which would therefore lose all descriptive capacity.

Bernoulli was aware of the difficulty posed by this problem, writing in 1738 that "Although the mathematical calculation shows that the expected gain is infinite, it is clear that a reasonable man would stake no more than twenty ducats on the game".[9] To resolve this paradox, he suggested making a distinction between money and the utility of the sum involved. By utility, we now understand the psychological value (subjective) attributed to an object or a line of conduct and not its value as objectified by a sum of money for example. Bernoulli argues that the usefulness of a small increase in wealth is inversely proportional to the amount of property already owned. In other words, the more money you have, the less the psychological gain represented by an additional amount will be important to you. Thus 10,000 Euros represents a significant sum for a poorer person but a quite insignificant gain for a billionaire. With this simple proposal, Bernoulli identified for the first time in the history of economics what is today called *declining marginal utility of wealth*. According to him, the paradox of St. Petersburg can easily be resolved, if we see that the utility curve can be represented by a logarithmic function.

$$U(x) = \log(G)$$

$$E[U](G) = \sum_{n=1}^{\infty}\left(\frac{1}{2^n}\right) \times \log(2^n)$$

This type of function, indeed, efficiently simulates the levelling tendency of the progression of utility compared with the arithmetic progression of monetary values.[10] Let's take another example: if you won a million euros in the lottery, you would be very happy, but if you won three million Euros, you would not be three times happier. So, at certain level, the psychological gain of any unit of money tends to be increasingly less important. This means that there is *no strictly proportional relation* between monetary values and psychological utilities. Once we accept this, the enigmatic nature of the paradox disappears. Indeed, as

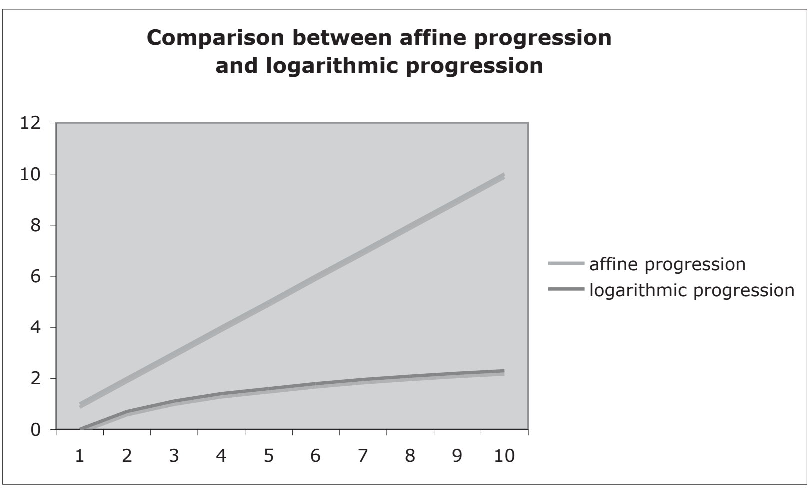


Figure 1: *Comparison between affine progression and logarithmic progression*

the mathematical calculation requires that one bet an infinite sum in the proposed game, why would nobody agree to risk a large sum? The answer is that the infinite sums that the game offers objectively tend to be distorted by the subjective representation of individuals.

In Figure 1 the lighter curve shows how the relationship between earnings and psychological satisfaction is represented implicitly before the resolution of the paradox (proportionality single). The logarithmic curve (the darker curve) shows the way we represent these two factors since this is more in line with our psychological reality.

5. AND UTILITY VALUE? AN EXPERIMENT

The enigma of terrorism involves a clash between interests and values but also a clash between values and values. Basing my reasoning on the solution to the paradox of Saint Petersburg, I wondered if it was possible to obtain experimental clues about a curve of "value utility". Value utility represents the psychological costs involved in the violation of a value given the strength of our adhesion to a cause. The assumption is that the paradox of mental incommensurability only works because it is based on the implicit idea of a simple proportionality between the strength of axiological belief and its corresponding psychological utility.[11] If the curve of utilities is not affine (i.e. representing a strictly proportional correlation between the strength of adhesion, presented in abscissa, and psychological utilities, in ordinates) then we may thus understand how there may be a commensurability between values and interests at a certain level of belief while at another level, no commensurability is found. This would remove the paradox.

In order to check this hypothesis, I implemented an experimental protocol based on a classic study well known as the *ultimatum game*. This was made possible with the help of students of the Master of Sorbonne (class 2006–2007). In this game two subjects have to share a divisible consumable (money or cake, for example) with the following rules: the first player imposes a certain distribution (he may choose for example 99% for himself and 1% for the second player), but the second player can reject this division. If he does, both lose everything. This exercise has often interested cognitive economists because it makes it easy to show experimentally that people do not respect balance as predicted by the rational choice theory. According to this theory, the second player should accept an unfair distribution even if the first player merely leaves him a single unit of the consumable. Why should he accept such an unfair division? Because "one" is more than nothing, so, in a strictly rational point of view, it is always in his interest to accept. However things don't work this way in real life.

The ultimatum game led to hundreds of experiments.[12] There were many attempts to vary factors that might influence the outcome of the game: sex, culture, age, type of studies. One study even tried to find out if the behaviour of subjects in this game could be linked to testosterone levels.[13] Despite the influence (often marginal) of these different factors, all these experiences lead to the same conclusion: most people, whatever their characteristics, do not easily accept an unfair distribution.

On average, the offers of player 1 are around 40% of the amount to be divided. Other centrality indicators are, for the median, proposals ranging between 30 and 40 %, and, for the mode, in the range of 40 to 50 %. Player 2 rejects the offers of player 1 when they are less than 20% of the consumables at stake.[14]

Several interpretations of these results have been proposed,[15] however none of them invalids the idea that the ultimatum game involves an axiological dimension.

Indeed, those who reject the proposed distribution by the first player obviously think that a fair share of the property should be: 50%/50%. Any distance from this fair share increases feelings of injustice. Even if everyone would agree that playing first in this game confers a certain advantage, abuses of this advantage in the distribution of earnings may lead to a strong sense of unfairness. Accepting the minority share of earnings means a value cost: "I cannot accept something unjust."[16] However, this value cost can be balanced by the profit. When this decreases, the value cost increases simultaneously, so we can understand that, in these conditions, player 2 prefers nothing to a small profit. Blount's work (1995) provides an experimental perspective of this interpretation. He compares a set of classic ultimatum games with a most unusual protocol in which the share proposed by player 1 is generated randomly (a fact of which player 2 is aware). In these conditions, the demands of the player 2 drop significantly because he is aware that the unequal allocation doesn't break any moral principles. It is instead the result of pure chance, which is, by definition, amoral.

Generally, economists were interested in the rate of acceptance or rejection for a given population and in the levels of real balance. In the experiments for which the results are given below, I approached this classic game theory in a slightly different way. The voluntary subjects of the experiment had to play the role of player 2 facing a fictitious player 1. I didn't want to check if the player would accept the division or not, rather at what price he would accept given that he knows the share to be pre-defined. According to List and Cherry's work (2000), then those of Munier and Zaharia (2002), the higher the sums involved, the more the level of player 2's acceptance decreases. They note, for example, that in both France and Romania the acceptance levels of player 2 decreased considerably when the bets were multiplied by 50 times.

This is not illogical but proves, once again, the commensurability between material interests and the defence of moral rule (fair sharing of the consumable). This situation allowed us to achieve a curve in utility values (in our particular experimental set-up with its equal distribution of consumable which is limited and artificial). I will next develop the fact that value curves may vary (depending on the value involved, the biography of the individual etc.), but their shape always remains much the same. Moreover, as previously explained, the nature of extremists' thought is close to that of ordinary people (both are able to express mental incommensurability) so this curve will help us to understand their state of mind.

In our experiment, the subject had to answer in nine ultimatum games. Each time, the subject was asked to specify the minimum amount he would accept from player 1.

The statement submitted to the volunteers was:

> The game has the following rules: There is money to be divided between two people: *A* and yourself. *A* has the advantage of deciding how money will be shared. You have the right to reject this division and, in that case, you both lose. For example, there are 10 Euros and *A* may decide to keep 8 Euros and leave you

> 2 Euros. You can reject this division so you both lose these 10 Euros. This decision costs *A* 8 Euros and cost you 2 Euros. The more money is at stake, the more you will lose if you reject the proposed share.

There is no right or wrong answer to this game.

Nine possible situations were offered to the volunteers namely: From what total amount would you accept 45% of the amount (55% for A)?

From what total amount would you accept 40% of the amount (60% for A)?
From what total amount would you accept 35% of the amount (65% for A)?
From what total amount would you accept 30% of the amount (70% for A)?
From what total amount would you accept 25% of the amount (75% for A)?
From what total amount would you accept 20% of the amount (80% for A)?
From what total amount would you accept 15% of the amount (85% for A)?
From what total amount would you accept 10% of the amount (90% for A)?
From what total amount would you accept 5% of the amount (95% for A)?

In this experiment, each step was a larger violation of the rule of equitable distribution than the previous step but remains proportionally equivalent. The purpose was to collect the level of corruptibility reported anonymously. What would the total amount need to be for you to accept to close your eyes to the aforementioned violation? Of course, the situations were exposed to subjects one after the other, and they had to respond step by step without knowing what would the following proposal would be.

The protocol was made to get an establishment of *a curve of value utility*. Would the answers merely express a proportionate reaction to the violation of the rule? Or, conversely, would they allow us to solve the paradox of mental incommensurability? It should of course be admitted that the topic of this experiment was not exactly psychological realism, but the subjects' representation of their own corruptibility. The results indicate the way they imagine how a fair-minded person should behave.

The protocol was submitted to 687 volunteers, chosen for practical reasons but also in order to obtain a relatively homogeneous sample (both in terms of income and age group) among the students in Sociology of Paris V, Paris IV, Nancy II, Paris XIII and the Marc Bloch University of Strasbourg (first year). The statement was read by both the subjects and by the investigator to be sure that everyone had understood the rules of the game and what was requested.

In the results obtained, the quantitative links between these scores that reflected how people expressed their outrage[17] were of course more important than the scores themselves.

The overall results obtained are presented in Figure 2. It can be noted that for the first five games, the responses of the subjects (which are given in Euros) describe a linear progression, i.e. a simple proportionality link, whereas from the sixth, there is a geometrical type progression (i.e.: from the distribution 80% / 20%).

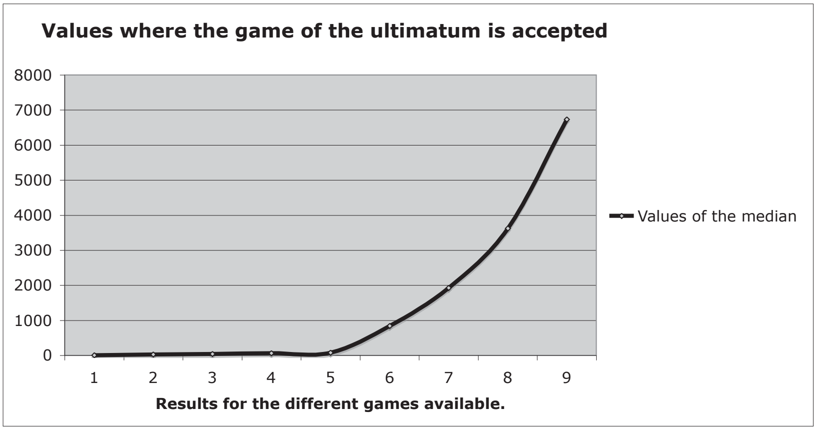


Figure 2: *Values where the game of the ultimatum is accepted*

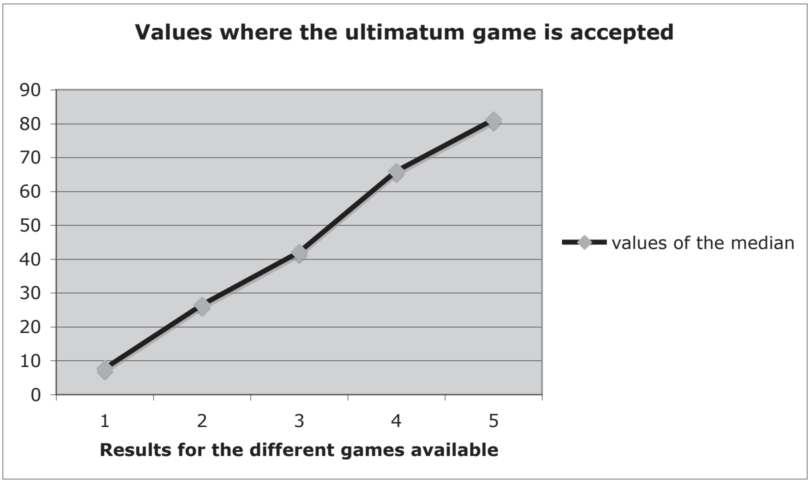


Figure 3: *Values where the ultimatim game is accepted*

A more precise representation of the linear progression in the first five games is provided in Figure 3.

These results are consistent with those generally obtained because, as we have seen above, the various experiments based on the ultimatum game show on average that player 2 refuses the proposed distribution by player 1 when it is less than 20% (which gives some indication on the reliability of our results).

There are three profiles in this experiment:

1) Those who accept the idea of unfair repartition. They decide to accept the game for a small fee (1 euro for instance) regardless of the proposed distribution. They show that they have understood and accepted that a little is better than nothing. They have an amoral approach to the game and represent approximately 15% of subjects.
2) Those who don't accept the division whatever the cost (or accept for an exorbitant sum). They wish to show that they disapprove of the principle involved in the game and the idea of unequal distribution. They represent just under 6% of subjects. This is exactly the kind of response which we would expect from an extremist.
3) Those who have a reasonable enthusiasm for the initial distributions and a tendency to show exponential desires to compensate for

the violation of the rule of fair sharing. They make up the majority of the sample (79%).

For most subjects, the gradual and proportionate violation of the rule creates, at a certain level, an exponential demand for compensation. The experiment proposed here does not demonstrate that idea definitively but opens the possibility of a discussion which is not based on pure speculation. The idea of an exponential nature of value utilities offers a solution to the paradox of mind incommensurability because it allows comparability between the material interests of an individual and his values when his adhesion is relative (area of commensurability) and it shows that when the adhesion becomes more or less unconditional, it implicates a level of corruption that confines to infinity. The assumption I propose is that value utilities may be described by the characteristics of geometrical progression as well as material utilities may be described by logarithmic functions.

This is shown in the Figure 4 below.

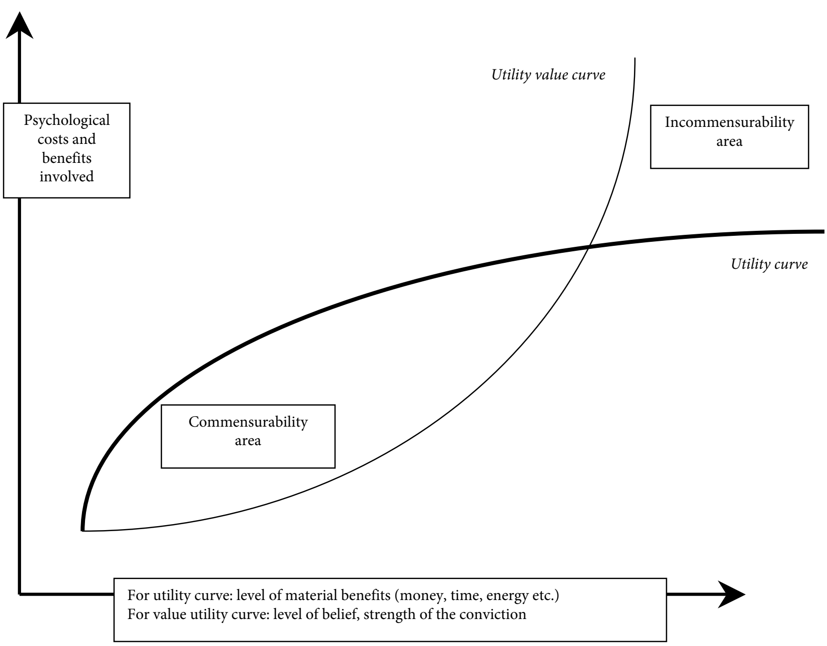


Figure 4

If we chose another type of situation that violated an unconditionally accepted value (condemnation of rape for example), it would be easily observed that the subjects all belonged to the second category. Conversely, the third category would represent the whole of the sample if the problem had been presented without its moral implications (for example: "Do you prefer, *ceteris paribus*, 100 Euros or nothing?"). The situation of the ultimatum game is ideal because it involves a value which many believe conditionally (everyone would agree with the idea of equal sharing but many would also admit that "it depends on the circumstances"). It enables us to observe how a progressive sense of injustice can bring an individual into a process in which he feels ready to abandon the strict defence of his own interests.

This is precisely the mind-set of an extremist when he feels that the world or a social system in particular represents an intolerable affront to a value which he unconditionally adheres to. Therefore, as described Khosrokhavar (2006: 351–352) with regard to Islamic terrorists: "Everything takes place within a deadly horizon where hurting the opponent is more important than the well-being of the actor himself." This way of thinking could remind us of the logic often involved in the ultimatum game.

The descriptive hypothesis proposed here offers an idea of the mental configuration that makes possible the ultimate sacrifice by those who are neither crazy, irrational or victims of a total moral eclipse. The geometrical curve of the utility value is perfectly compatible with the fact that an individual is capable of breaking a value with which he agrees without hesitation to serve another value that he unconditionally believes. This descriptive hypothesis is slightly sketchy, I admit. It needs to be completed by further studies[18] aimed at explaining, for example, how a normally constituted mind can ascend the steps of the staircase of terrorism, to use Moghaddam's metaphor.

NOTES

1. For details cf. Bronner (2009).
2. This is one of the themes that Pharo (1996: 168) examines in his interpretation of "evil": "The phrase 'banality of evil' can be understood only as a way of

describing the routines by which those who use violence, as those who are witnesses, suspend their moral convictions."

3. Damasio, Grabowski, Galaburda and Damasio (1994)
4. On this point see, for example, Khosrokhavar (2006).
5. This term was defined by Boudon (1995: 67): "Je parlerai de raisons transsubjectives pour indiquer que, afin d'être crédibles, ces raisons doivent être vues par le sujet sinon comme démonstratives, du moins comme convaincantes. Je désigne donc ainsi les raisons qui ont une capacité à être endossées par un ensemble de personnes, même si l'on ne peut parler à leur propos de validité objective."
6. I detailed this issue in Bronner (2009).
7. The technique of suicide bombing appears to have been initiated by the Liberation Tigers of Tamil Eelam (LTTE). There is no post-mortem reward in their ideology.
8. Cf. Rouilhan (1996).
9. There is a summary of this paradox and its resolution in the famous Specimen theoria novae measurement.
10. There is a more precise formulation of the problem

    $$U(x) = \mathrm{b}.\log(\mathrm{a} + x/a)$$

    If one refers the monetary result by x ; a the initial wealth of the individual ; b a positive constant ; y a monetary value, we get:

    $$U(y) = \sum_{n=1}^{\infty} \frac{1}{2^n} \,.\, \mathrm{b} \,.\, \log . \left\{ \frac{(a + 2^n)}{a} \right\}$$

    This suggests that $U(y)$ is levelled off by an amount depending on "a".
11. This idea is implicit in the theory of cognitive dissonance (Festinger, 1957 and Festinger, Schachter and Riecken, 1993) and this is particularly clear in Poitou's study (1974).
12. There are summaries in Roth (1995), Camerer (2003), Bolton (1998) and Bearden (2001).
13. Eckel and Grossman (2001); Rapoport, Sundali or Seale, (1996); Roth, Prasnikar, Okuno-Fujiwara, Zamir (1991); Murningham and Saxon (1998); Carter and Irons (1991).
14. On this point see Le Lec (2003).
15. For example, Fehr and Schmidt (1999); Kreps, Milgrom and Wilson (1982); Bolton and Ockenfels (2000).
16. What is not removed from remarks of Aumann (1997: 8) about the "basic principles". According to him, the subjects who assume the role of second player in this game would apply standards of action.
17. Because some statements appeared quantitatively extravagant and could distort the search for the centrality of the series, I didn't accept the calculation of the average point by point. I preferred to retain the value of centrality calculation of the median, by the method of linear interpolation (more accurate than

the "mode") which has the advantage of eliminating the aberrant values of the variable.

19. I have discussed these issues which I find very important elsewhere (Bronner 2009).

REFERENCES

Aumann, R.J. (1997) "Rationality and bounded rationality", *Games and Economic Behavior*, 21: 2–14.

Bearden, J. (2001) "Ultimatum bargaining experiments: the state of the art", University of North Carolina at Chapel.

Bernoulli, D. (1954) "Exposition of a new theory on the measurement of risk", *Econometrica*, 22: 23–36.

Blount, S. (1995) "When social outcomes aren't fair: The effect of causal attributions on preference", *Organizational Behavior and Human Decision Processes*, 63: 131–144.

Bolton G. (1998) "Bargaining and dilemma games: From laboratory data towards theoretical synthesis", *Experimental Economics*, 1: 257–288.

Bolton G., Ockenfels, A. (2000) "ERC: A theory of equity, reciprocity and competition", *American Economic Review*, 90: 166–193.

Boudon, R. (1995) *Le juste et le vrai*, Paris: Fayard.

Bronner, G. (2009) *La pensée extreme. Comment des hommes ordinaires deviennent des fanatiques*. Paris: Denoël.

Bronner, G. (2001) "Fanatisme, croyances axiologiques extrêmes et rationalité", *L'Année Sociologique*, 51(1): 137–160.

Camerer (2003) *Behavioral Game Theory. Experiments in Strategic Interaction*. Princeton, NJ: Princeton Univesity Press.

Carter J., Irons M. (1991) "Are economists different and if so, why?", *Journal of Economic Perspectives*, 5: 171–177.

Cherkaoui, M. (2007) *Good intentions: Max Weber and the Paradox of Unintended Consequences*. Oxford: Bardwell Press.

Crenshaw, M. (1981) "The cause of terrorism", *Comparative Politics*, 13: 379–399.

Damasio, H., Grabowski, T., Galaburda, A.M. and Damasio, A.R. (1994) "The return of Phineas Gage: clues about the brain of a famous patient", *Science*, 264(5162): 1102–1105.

Eckel, C., Grossman, P. (2001) "Chivalry and solidarity in ultimatum games". *Economic Inquiry*, 39: 171–188.

Etienne, B. (2005) *Les combattants suicidaires*. Paris: L'Aube.

Fehr, E., Schmidt, K. (1999) "A theory of fairness, competition and cooperation", *The Quarterly Journal of Economics*, 114(3): 817–868.

Festinger, L., Riecken, H. and Schachter, S. (1993) *L'Echec d'une prophétie*. Paris: Puf.

Guidère, M. and Morgan, N. (2007) *Le manuel de recrutement d'Al-Qaïda*. Paris: Seuil.

Khosrokhavar, F. (2006) *Quand Al-Qaïda parle*. Paris: Grasset.

Kreps, D., Milgrom, P., Wilson, R. (1982) "Rational cooperation in the repeated prisoners dilemma", *Journal of Economic Theory*, 27: 245–252.

Krueger, A. (2007) *What Makes a Terrorist: Economics and the Roots of Terrorism*. Princeton, NJ: Princeton University Press.

Le Lec, F. (2003) *Rationalité et règles comportementales: Une étude du jeu de l'ultimatum, Mémoire de DEA* – Aix/Marseille III, unpublished.

List, J. and Cherry, T. (2000) "Learning to accept in ultimatum games: Evidence from an experimental design that generates low offers", *Experimental Economics*, 3: 11–31.

Munier, B., Zaharia, C. (2002) "High stakes and acceptance behavior in ultimatum bargaining: A contribution from an international experiment", *Theory and Decision*, 53(3): 187–207.

Murningham J., Saxon M. (1998) "Ultimatum bargaining by children and adults", *Journal of Economic Psychology*, 19: 415–445.

Moghaddam, F. (2005) "The staircase to terrorism: A psychological exploration", *American Psychologist*, 60(2): 161–169.

Pharo, P. (1996) *L'injustice et le mal*. Paris: L'Harmattan.

Poitou, J-P. (1974) *La dissonance cognitive*. Paris: Armand-Colin.

Rapoport, A., Sundali, J., Seale, D. (1996) "Ultimatums in two person bargaining with one-sided uncertainty: Demand games", *Journal of Economic Behavior and Organization*, 30: 173–196.

Roth, A. (1995) "Bargaining experiments", in Kagel, J., Roth, A. (eds), *Handbook of Experimental Economics*, Princeton, NJ: Princeton University Press, pp. 253–348.

Roth A., Prasnikar V., Okuno-Fujiwara M, Zamir S. (1991) "Bargaining and market behavior in Jerusalem, Ljubljana, Pittsburgh and Tokyo: An experimental study", *American Economic Review*, 81: 1068–1095.

Rouilhan, P. (1996) *Russel et le cercle des paradoxes*. Paris: Puf.

Ruby, C.L. (2002) "Are terrorists mentally deranged?", *Analysis of Social Issues and Public Policy*, 2: 15–26.

Sageman, M. (2004) *Understanding Terror Networks*. Philadelphia: University of Pennsylvania Press.

31

LOCAL TRUTH MECHANISMS

About Moroccan Political Consensus

Jean-Noël Ferrié
CNRS, CJB (Rabat, Morocco)

Baudouin Dupret
CNRS, CJB (Rabat, Morocco)

In his fascinating analysis of *The Old Regime and the Revolution*, Mohamed Cherkaoui notes that, in a Tocqueville perspective, "if the power is not able to consistently show its strength, the slightest threat makes it even more fragile" (Cherkaoui, 2003: 75).[1] It follows that an authoritarian power, which is not able to use at his convenience repression, sees its days numbered. This judgment applies no doubt to the French Revolution and to the poor way in which the monarchy behaved. But one can wonder whether it is always true and can be understood in a extensive sense, as it is often done. In other words, can we argue, on this basis, that whenever a power comes back on one of its decisions or accepts reforms demanded, it undermines its foundations? There is a tendency to think so, which owes as much to political analysis as to common sense. We will show that it is, however, a mechanism and not a law, and that this mechanism, like all mechanisms cannot be true but in context, and thus that it can be true in some contexts but wrong in others. In this sense, it has an undeniable descriptive interest, but only a small prospective relevance. Its truth value is strictly depending on what it locally means "to show one's strength." Mohamed Cherkaoui's remark must be understood literally and specifically.

Insofar as it is impossible to talk in general terms of mechanisms whose value is strictly related to the circumstances of their working, we illustrate our views on the basis of three Moroccan events: the February 20 Movement and the adoption of a new Constitution in July 2011; the case of the royal pardon granted to a Spanish paedophile, that made the headlines during the summer of 2013; and the case known as the "kiss of Nador," which took place during the fall of the same year. But before proceeding to the cases, we will present a specificity of the Moroccan political system, which looks important if we want to understand the scope of the Tocqueville perspective in this case and, therefore, give us a fair idea of its contextual plasticity. This specificity is the aversion to dissent.

1. AVERSION TO DISSENT, A SPECIFICITY OF THE MOROCCAN POLITICAL SYSTEM

The Moroccan political system has an undeniable specificity, which is constantly said not to exist and yet, keeps on manifesting itself. No doubt it is technically an authoritarian regime—that is to say a system the (at least) most important ruler of which does not depend on the polls. However, once this observation is stated, we have finally explained only a little. It is here that the specificity appears to be most obvious. In fact, there is no strong reason to deny to Morocco what is accepted implicitly for most other regimes, that is, that they all have peculiarities when compared to the category to which they are usually ascribed. One can, for example, speak of the specificity of the Swiss democracy, of the Argentine democracy or of the British parliamentary system, in which, contrary to what the label suggests, the Parliament is weak and the Prime Minister, i.e. the executive, strong. Political systems do exist only as special cases of the making of, or inability to achieve, local equilibriums.

However, specificity is sometimes even more remarkable, since it contradicts established categories. This is the case of the French political system, which is both parliamentary (legally speaking) and presidential (practically and now customarily). This case is perfectly admitted and does not shock anyone, when presented as such. Maurice Duverger has given it a name—“semi-presidential”—which, although counter-intuitive,[2] nevertheless designates its hybridity: namely, that it does not meet all the criteria of one of the categories of constitutional theory (Duverger, 1986). Morocco is roughly in the same taxonomic status: the king reigns and governs—since the monarchy is executive—but he is not the only actor in the political system, so that his power is constrained by other powers (although they are subordinate to him) and the characteristic of the system is more consensus than unilateral decision. In other words, the political system encourages (or requires) the participation of all actors. If authoritarian systems are generally characterized by a relative limitation of the upper-rank powers by lower-rank powers[3] and if there are numerous authoritarian regimes where the interests of most political actors are dealt with—it was, for example, the case of Mubarak’s Egypt (Brownlee, 2007)—the negotiated consent of all (or almost all) to decision making is itself infinitely more rare. This is what makes the Moroccan specificity.

One of the negative consequences of this mode of operation is the difficulty to take a decision, since the positions of a large number of actors must be taken into account (Ferrié, 2010; Dupret and Ferrié, 2012). This does not mean one never takes decisions in Morocco, but even when one takes decisions, one deals with positions which, *prima facie*, are harmed by the choice that was made. The reform of the Personal Status Code (*Mudawwana*) gives a perfect example (Bras, 2007). The first reform was attempted in 1999 by one of the ministers of the “*alternance*” government,[4] Said Saadi. The strong opposition which then manifested itself within the ranks of the cabinet, led to the *de facto* abandonment of the plan and to the Minister’s resignation when the Government was reshuffled in 2001. But the King adopted the Plan in a modified version and it was passed by the Parliament, in 2004. Substantial progress was made, but the legality of polygamy remained unquestioned. Neither was inequality in inheritance revisited. But divorce at the wife’s initiative became possible, like in Egypt in 2000. Globally, the new Moroccan code remains one step below the Tunisian Code, which prohibits polygamy, but progress is noticeable compared to the 1958 Mudawwana. If the sovereign has clearly ruled in favour of a progressive text, it nevertheless widely deals with the opponents' positions, so that they can approve it.

2. THE 20 FEBRUARY MOVEMENT AND THE CONSTITUTION OF JULY 2011

There are two interpretations of King Mohamed VI's response to the events of 20 February 2011, which took advantage of the Tunisian and Egyptian precedents to promote mobilization against the regime. We know that this answer was, in a speech on March 9, to announce a comprehensive reform of the Constitution. The first interpretation is to claim that the 20 February Movement forced the monarchy to the constitutional reform. The second is to argue that the Movement was an opportunity for the monarchy to promote a reform that was framed in the logic of its previous accomplishments (Dupret and Ferrié, 2012; Darif, 2012). The first interpretation of the King's answer leads to believe that the monarchy has shown its weakness (e.g., Jeghllaly and Bennani, 2012: 894). But it is a matter of sorting through the facts. If we consider the sequence of events, one can observe that the Movement had no significant relay within sectors and social groups that have not been the initiators of the protest. A field survey showed, moreover, that people who shared some of the Movement's criticisms against the political system did not agree to the questioning implied regarding the monarchy (Radi, 2013). In fact, despite the economic and social tensions comparable to that of other countries in the region, Morocco was able to conduct a consensual constitutional reform. Certainly, we can only consider the "yes" in the referendum on the adoption of the Constitution as a plebiscite in favour of the king. However, the question whether a plebiscite is or is not democratic in nature is here of little importance; what a plebiscite reveals is the legitimacy of the person asking the question and by extension, of the regime he heads.

It would, however, be wrong to regard the 2011 Constitution as a pretext to stage a plebiscite. Actually, it was in line with the recommendations of the Equity and Reconciliation Commission set up to clear the accounts of the "Years of lead". Admittedly, this way of clearing the accounts—that spares the officials involved in the persecutions—can leave us sceptical (Vairel, 2004), but it nevertheless fits the logic of closing the process of transitional justice (Elster, 2004). Moreover, the ambitious decentralization policy desired by the king for the Southern provinces required a general framework which, in the opinion of specialists, necessitated a constitutional reform. Added to this is, obviously, the recognition of the Berber language (Tamazight) the king made during his speech in Adjir, in October 2001. The constitutional recognition of this language as an official language of the State thus followed this political momentum and the creation of the Royal Institute of Amazigh Culture (IRCAM). These are pluralistic and liberal policies, which were not (and still are not) necessarily supported by all political and administrative actors. Another example is the policy of justice reform, which is still ongoing: why would the King insist so much on it if it was simply to give the illusion of his will in the matter? In general, the games of appearances are fickle and punctual, and it has never been the case in the judicial field. So it is more rational to attribute such an accumulation of initiatives and efforts to the existence of impediments rather than to strategies of pretences.

Thus, if we follow the evolution of the system, it is reasonable to argue that it is committed to a liberal dynamic, as it is reasonable to argue that this dynamic is not supported by all its components or elites which are part of it. It is, indeed, far from certain that decentralization, Tamazight recognition or promotion of female equality can be gladly endorsed by the conservative opinion, as legitimist as it can be. Moreover, we can assume that its legitimism is primarily a consequence of its conservatism, so that the flexibility of the monarchy is limited by the nature of its supporters. That being said, it is not a specific situation that would allow describing Morocco in contrast with other countries: this is the case of all governments, whether democratic or authoritarian. The difference in the case of Morocco is that the questioning of the authority of this particular ruler, i.e. the king, would be at the same time the questioning of the regime.[5] In this perspective, it is not unlikely that the monarchy has used the events of 20 February to impose a host of reforms to its conservative supporters. This would explain both the undeniable significance of these reforms and the fact that they do not restrict the royal leadership as Mohammed VI re-formulated it since the beginning of his reign. But even beyond the nature of the intentions that led the ruler to decide a broad constitutional reform in the wake of a series of demonstrations (even though limited), the question is simply whether they have been interpreted as a sign of weakness, since it is indeed an issue of interpretation. The question, in fact, is not whether the government is strong, but if it shows its strength, and it is not whether it is weak, but if it shows its weakness. It is a matter of «exhibition» and not effectiveness. It follows that claiming that the regime has shown its weakness because it reformed the Constitution is irrelevant. This is simply not what it has done which is at stake, but what it *seemed to do*. As the prestige of the king had not been shaken by the demonstrations and since he gave only what he had already begun to give, hardly anyone thought he was showing weakness.

3. THE CASE OF THE SPANISH PAEDOPHILE

On July 30, 2013, on the occasion of the Feast of the Throne, King Mohammed VI pardoned 48 Spanish imprisoned in Morocco. Among them was a paedophile convicted in 2011 to 30 years in prison, Daniel Galvan. His presence among the beneficiaries of royal grace, first went unnoticed and then was widely criticized on social networks and electronic media opposed to the monarchy.[6] Two versions of the facts circulated. The version conveyed by the opponents can be summarized as follows: Daniel Galvan, before coming to Morocco, worked for the Spanish intelligence services. His grace was granted for reasons of "national interest", that is to say, in order not to harm the relations between Spain and Morocco. The architect of this grace was the king's advisor, Fouad El Himma, reviled by the February 20 Movement and its supporters. The final version presented by the authorities is significantly different. Initially, it was not a pardon but permission for the convicted to purge his sentence in Spain. An administrative error led to confusing the list of pardoned convicts and the list of convicts allowed serving their sentence in Spain. This error is attributed to a senior official dismissed after the administrative investigation initiated at the sovereign's request. Most obviously, the two versions are starkly contrasted. The first blames the king's counsellor and the second a senior official. The first explains the pardon through a transaction with Spain and the second through error. The two versions cannot be mixed: if we accept one we must deny the other.

The first version is far from neutral. It is defended by the same media and organizations, of a leftist tendency, that had supported the February 20 Movement, among which the Moroccan Human Rights Association (AMDH) that called for a demonstration against the release of Daniel Galvan.[7] Demonstrations took place in several cities in Morocco, gathering, each time, a few hundred people or even two thousand in Casablanca. We can certainly assume that these events reflect a "popular emotion" but only if we acknowledge at the same time that it is not beyond the groups used to mobilize in order to denounce the regime. If the scandal "succeeds", it is therefore less because its promoters have managed to create a real movement of opinion than because they targeted an action that everyone is willing to admit as an irrefutable moral fault: to free a paedophile after only a few months in prison. The argument of "national interest" could only worsen the fault, as it was to say that plainly blamable act was committed for the sake of a (relatively) powerful and not always benevolent neighbour, i.e. Spain. This amounted to admit that a Spanish man could with impunity rape Moroccan children. Legal charges are rigorously consequential, first, because they project, according to the beautiful expression of Paul Veyne (1976: 279), the fuzzy fear of a specific sanction and the specific fear of a fuzzy sanction; secondly, because they provoke outrage, which is not a reflexive and prospective attitude but an emotion, and therefore is not activated by the fear of punishment. It is not possible to decide, from an external point of view, if it is fear or indignation that provoked the sovereign's reaction, but there is no reason to doubt that he shares the same morality as Moroccans and thus was outraged by indignity. Anyway, the question is not related to the reasons of his reaction but to the form it took.

It came very quickly, on August 3, three days after the grace had been granted and the day after the first demonstration. A statement from the Royal Cabinet stated he did not know the merits of the case and ordered an investigation to determine responsibilities. The next day he cancelled his grace. On August 5, he gave instructions that the Delegate General for Prison Administration and Reintegration, whose liability had been established, be revoked. The same day an international arrest warrant was issued by the Moroccan Justice Department and Daniel Galvan was arrested in Spain. On August 6, the king received the victims' families. The response was not only quick but comprehensive: repairing the error (Daniel Galvan was imprisoned in Spain where he will serve his sentence), sanctioning the official designated by the investigation, paying attention to the suffering of the victims. What is striking, thus, is the determined character of the royal response. The case does not go beyond, even if the Moroccan media continue to discuss Galvan's fate in Spain. Here, one may be tempted to speak of "withdrawal". However, in order to speak of "withdrawal", there should have been a position publicly taken and defended addressing explicitly the Galvan case. However, neither the king nor the royal cabinet addressed the case, one way or another. It is a mistake, in fact, to consider that there is a "withdrawal" when an action is abandoned or overruled. There is no "withdrawal" when one corrects an action that was not committed deliberately for what it was and when one agrees it is morally unjustifiable. Correcting a mistake, punishing the guilty, supporting the victims is, on the contrary, a way to show determination; that is, in other words, according to Claude Gilbert's adequate expression, "assuming the power" (Gilbert, 1992: 185), and assuming the power is never withdrawing. The case of the Spanish paedophile suggests thus that the need "to show one's strength" should not necessarily lead to support any decision, on the pretext that not to support it would mean "withdrawing" (in the sense that it would amount to reveal one's weakness). What makes the power credible is simply that it acts effectively in a crisis situation.

4. THE CASE OF THE KISS OF NADOR

The case of "the kiss of Nador" begins with a letter of denunciation written by a coffee-house owner, president of a "human rights" association, that was sent to the public prosecutor of Nador. He mentioned in his letter a photograph published on Facebook of two teenagers, aged 14 and 15, exchanging a kiss in public. He emphasized that this conduct was "a blow (...) against Moroccan education and culture" and the "feelings of citizens." The prosecutor, rather than dismissing the case, decided to proceed with the arrest of the two teenagers on the basis of Article 484 of the Moroccan Penal Code, which provides that: "Is punished by imprisonment of two to five years, any indecent assault committed or attempted without violence on the person of a minor under eighteen years, of a person lacking discernment, of a handicapped person or a person known for his low mental capacity, of one or the other sex." They were arrested, on October 4, 2013, and placed in a detention centre for minors. They were then released on bail, after three days, waiting for their judgment. At the first hearing, the judge asked for a social investigation and referred the matter to November 22. On November 22, the prosecutor advocated a simple reprimand. This meant that to his mind, prosecutions were not displaced, that there was indeed something wrong, but that it was possible to be merciful.

This case caused a stir in Morocco and abroad. By "stir", one should not understand that much of Moroccan and foreign public opinion was mobilized, but that the media, including social media, have widely publicized the case. A "kiss-in", however, was organized in several Moroccan cities and countries particularly in Rabat in front of the Parliament. It attracted very few participants. In Rabat, where it attracted the most, there was at most a few dozen couples. The media success of this last gathering came paradoxically not from the kissing, but from the intervention of some thugs posing as "royalists" and violently separating couples entwined. However, Morocco's image got seriously damaged, making it appear as a country where teenagers go to court for a kiss,[8] which is factually true even if it is a singular case and not a trend. This image is the exact opposite of the way in which the country wants to present itself. Indeed, it claims to be pluralist, tolerant and moderate, especially in all that relates to Islam, which includes, of course, sexual modesty. In fact, it is rather the case, even if sexual relations outside of wedlock are still punishable by imprisonment (art. 490 of the Penal Code).

Why is the kiss-of-Nador case interesting to consider, after having reviewed the two other cases? This is because it presents a case of inverted figure and allows in contrast[9] better understand the first two. Indeed, if, regarding the Constitution and the Spanish paedophile, the suspicion was that the power had relented and was weakened, the kiss case shows, instead, a power that does not give up and upholds the proceedings,[10] all a bit ridiculous and far from the daily reality of Morocco, which earned him at best some diffuse disapproval it could have spared itself. Nothing would have been easier than to give the prosecutor the instruction to terminate the proceedings. The Minister of Justice, either on its own or not, did not give it. And yes, indeed, it is not easy for an Islamicist-conservative minister to appear as supporting moral depravity. It is actually in these very terms that the petitioner justified his letter:

We think first and foremost to the future of our children. What we wanted most is to end some debauchery. The purpose of our association has never been to limit individual freedoms. But still, let's be realistic! When individual freedoms encroach on public space, the situation becomes alarming. Moreover, no Moroccan parents would accept his children to go to school for kissing instead of their courses. Proof of this is a survey conducted by a national TV channel which showed that 97% of Moroccans are against such behaviour. What to ask is how we came to such a situation? You need to open a national debate to ask clear benchmarks. Otherwise, our identity, our values and education of an entire youth of a nation, will be even more threatened.[11]

Presumably this is the position of most people who believe he was right and of those who think that, even though he was not completely right, he was not really wrong. All these people are potentially numerous. A political leader with a populist fibre would not consider bullying them. But a more general explanation can be proposed: the fear of the negative signal which a waiver of prosecution would have sent, since the case was public. This would have meant that it was permissible to kiss in public in Morocco. What would have been acceptable for teenagers aged 14 or 15 could have been held true for teenagers aged 16 to 17. And what sense would it have been to affirm it inadmissible beyond? The reasoning behind this fear was perfectly summed up by a famous comedian: "When the limits are infringed, there are no more limits." It expresses precisely the fear that not showing one's strength or the laws' leads to admit the weakness of the one and the other. The paradox of this attitude proceeds from the fact that strength stems either from the fear of displeasing or from the fear of not being able to restrain a possible disorder, whereas in the previous two cases, the decision to follow the same path as the protesters stemmed from the certainty to build a consensus, that is to say, to be in a strong position.

5. MECHANISMS ARE NOT LAWS

Jon Elster (1998) rightly noted that the social sciences have a greater need for mechanisms than for laws. Considering that a phenomenon proceeds from a law is to consider that, if the circumstances of departure are identical, the result should be identical, and it is therefore predictable. A mechanism, on the contrary, describes the formal aspect of an outcome, but it does not predict it. Like with laws, it has a universal usage, but only a posteriori. For each mechanism, there exists a mechanism producing the opposite result. Thus one can oppose to the maxim: "Like father, like son" another maxim: "To a miserly father, a prodigal son." The underlying idea is that what makes that something is A rather than B is also what justifies its being B rather than A. This is probably due to the fact that we are dealing with human actions and that, if human actions follow rules, they are not subject to laws (Winch, 2009). Therefore, circumstances and contexts—the purely contingent—are crucial in the making of an outcome.

We have observed that when the king goes in the direction of a "request from the street" (to put it in a nutshell), he assumes the power and temporarily establishes the consensus. Conversely, we do not claim that the Minister of Justice (or any other person who had the last word on the matter) has assumed the power in the case of the Nador kiss. Instead, he left the machine to continue its erratic road without worrying too much about the petty damage it could do. Regardless of his conservative preferences repeatedly affirmed the Minister might have risked dissent if acting otherwise: the issue of sexual freedom is a question that one is careful not to publicly open in Morocco, considering the wide tolerance demonstrated by authorities as an acceptable substitute for freedom, a substitute that tames and the goat and the cabbage. This attitude also characterizes the February 20 Movement, since it avoided throughout the first half of 2011[12] to mention this issue, as well as the question causally linked of religious identity and thus the right to freedom of conscience. It is easily understood that a conservative minister is even less able to act in this domain. In sum, in Morocco, one never decides through dissent, one always decides through consensus. It follows that the king cannot be described in the previous examples, as having yielded to the "demands of the street"; the correct description of what happened is that he took the initiative to reformulate consensus. This is ultimately what sums up the expression "assuming the power." From this point of view, "withdrawing" means, in fact, handling a problem so as to find a solution. The king has set up a new constitution with broad agreement of the parties and citizens and he obtained from the Spanish authorities that Daniel Galvan served his sentence.

However, ideas of power endorsement and consensus reformulation lead to thinking that this is a performance, that is to say something out of the ordinary. Moreover—and this appears in the scenarios that we treated as about the adoption of the Personal Status Code—this performance seems reserved for the king. It requires in order to be accomplished, a high degree of importance on topics upon which it is hard not to agree. This is probably explained by the nature of the Moroccan monarchy whose centrality is often misunderstood and treated as a position of omnipotence. Yet this is not the case. Rather we must consider the centrality as the hub of a wheel whose role is dependent on the rim and spokes together with which it constitutes a system. This is the set that allows the wheel turning. In other words, the monarchy, political actors and society are in a systemic relationship that fosters cohesion, but also forces everyone to walk at the same pace. This "radial" theory was developed by Steffen Hertog in his work on the distribution of power in Saudi Arabia (Hertog, 2010). In this radial system, power is present in three concentric zones. In the centre, it is in the hands of the ruling family. In the central area, it is located in the upper echelons of the various administrative institutions. In the most remote area, it is characterized by interpenetration of interests of public servants and society. The essential phenomenon, the one that binds the whole together, is segmentation: the central part (the hub) is segmented between the princes of the reigning family; the administration is itself segmented in a way which reproduces and extends that of the reigning family, in the sense that the directions of administrative institutions are first connected to princes and not to the king (they are the spokes). As for the lower level, it deploys opportunistic strategies: it is not necessarily located in the extension of the top two levels' segmentations, so it evolves between obedience and autonomy. In such a system, as Hertog shows, decision taking and implementation is difficult because all the segments of the "State" are not really integrated: they are fragmented because of the segmentation of the political system. A decision taken above therefore circulates between State fragments rather than being applied directly, as would be the case in an ideal Weberian bureaucracy. It thus requires special circumstances—the pressure of an event or the evidence of a risk—to have the fragments temporarily resealed.

Certainly, Morocco is not governed by a bunch of princes but by a king. This does not mean that the power is not segmented. It is, first of all, segmented institutionally, because it is shared with political parties; of course, the sharing is unequal, but it exists and structures Moroccan political life since independence. The 2011 Constitution endorsed that fact by giving autonomous status to the head of government, who necessarily comes from one of these parties; the king is bound as regards his appointment and he cannot dismiss him. It is then segmented by the existence of family and palatial lineages, which are the link between the sovereign, the upper public services and the business world. Both groups have intense collusive transactions. If we consider that these are the elements of the segmented structure of a hub, we can quite apply the radial theory in Morocco. It follows, in the case of the problem that interests us, that the only way to temporarily reseal the pieces around a decision is a royal performance. But the felicity conditions of such a performance imply that it cannot but be provisional and especially that it does not seek to undermine the very structure in which it originates: the segmentation of power. It must, in fact, ensure the agreement of the many stakeholders to be successful; it cannot therefore be deployed against their fundamental interests. Two examples will suffice: during the preparation of the new Constitution, the expert commission was flanked by another committee, chaired by a counsellor of the king, which brought together the political parties; and in the case of the Spanish paedophile neither party has discarded the other, neither the king vis-à-vis the Minister of Justice nor the Minister of Justice vis-à-vis the king.

In Morocco, when the king "assumes the power", it executes a performance consisting in resealing the political system around him. The action, firmly conducted, is visible for what it is. So, he can perfectly show his strength in accepting a claim or reversing a decision. This is not a sign of weakness. The weakness is, in fact, where it avoids showing itself, when it proves unable to take a decision around which there is a consensus. The ambiguities of the Constitution on the death penalty or the freedom of thought, substituted for the freedom of conscience, as well as the inability to stop the misguided prosecution in Nador are, however, the consequences of a constitutive weakness: the dependence of all political actors on consensus. It is not a permanent feature of Moroccan public life, but was established in the years ninety, with the negotiation of "alternance". Anyway, we hope to have shown that a mechanism is only true in the circumstances that make it true, i.e. that the context is of pivotal importance (Bunce, 2000). Indeed, if we forget the important role of local circumstances and practicalities, mechanisms end up being confused with laws. In Morocco, the weakness is not in what is conceded, but paradoxically in what is kept intact.

NOTES

1. This text originates from a discussion with Jon Elster, two months after the events of 20 February in Morocco. He argued, on the basis of his remarkable knowledge of Tocqueville (e.g., Elster, 2009), that the king's decision to implement a constitutional reform in accordance with the demands of the demonstrators, could weaken the monarchy.
2. Since one can think that it gives less power to the president than the presidential system, while it offers a lot more.
3. This is typically the case with the Parliaments one finds in authoritarian systems. This is not surprising since their constitutional ontology is almost always that of the representative system. In these systems, the Parliaments represent a constraint for governments, even though the latter control the polls. This constraint is more or less important, but never equal to zero: since there are parliamentarians and at least an organized hegemonic party, it is necessary to deal with it, with its personnel and with their interests. Similarly, it is necessary to take the

procedures into account, since the viability of the form the regime gave to itself depends on their (at least formal) respect (Dupret and Ferrié, 2013).

4. In Morocco, one calls "alternance" the coming to the government and the position of Prime Minister of political forces that have never accessed to it formerly. The "alternance" which is generally referred to is that of 1998, when the Socialist (USFP) Abderrahmane Youssoufi was appointed Prime Minister.
5. The two are closely related since independence, the institutions having been designed to preserve the leadership of the ruling dynasty (Zartman, 1964).
6. E.g., the information site www.lakome.com.
7. Release of 2 August 2013 (http://www.amdh.org.ma/fr/communiques/amdh-deplore-grace).
8. *Le Figaro* headlined: "Moroccan teenagers in court for a kiss" (10/11/2013).
9. Comparisons can be made by analogy or opposition. The latter possibility was illustrated by Geertz in his comparison of Morocco and Indonesia (Geertz, 1971).
10. We do not take into account the fact that in the first two cases, it was the political power that was in question, whereas in the latter, it was the judiciary. If, in Morocco, the Prosecution was independent, it could be argued that the intransigence of the prosecutor had nothing to do with "power", but this is not the case.
11. Interview with the head of the association behind the prosecution, as published in *Aujourd'hui*, 25/10/2013.
12. We know that it focused on strictly political claims, considering that all other claims might isolate it (Radi, 2011).

REFERENCES

Brownlee, J. (2007) *Authoritarianism in an Age of Democratization*. Cambridge: Cambridge University Press

Bras, Jean-Philippe (2007) "La réforme du code de la famille au Maroc et en Algérie: quelles avancées pour la démocratie?", *Critique Internationale*, 37: 93–125.

Cherkaoui, M. (2003) "L'Etat et la Révolution. Logique du pouvoir monopoliste et mécanismes sociaux dans *L'Ancien régime* de Tocqueville", *Revue Européenne de Sciences Sociales*, 41(126): 61–79.

Duverger, M. (1986) "Le concept de régime semi-présidentiel", in M. Duverger (ed.), *Les régimes semi-présidentiels*. Paris: PUF.

Dupret, B., Ferrié, J.-N. (2012) "Maroc: réformer sans bouleverser", *Afrique du Nord—Moyen-Orient 2012–2013*. Paris: La Documentation Française.

——— (2013) *Délibérer sous la coupole. L'activité parlementaire dans les régimes autoritaire*, Louvain–Beirut: Presses de l'IFPO

Elster, J. (1998) "A plea for mechanisms", in P. Hedström, R. Swedberg (eds), *Social Mecanisms. Analytical Approaches of Social Theory*. Cambridge: Cambridge University Press.

——— (2004) *Closing The Books. Transitional Justice in Historical Perspective*. Cambridge: Cambridge University Press.

——— (2009) *Alexis de Tocqueville, The First Social Scientist*. Cambridge: Cambridge University Press.

Ferrié, J.-N. (2010) "Maroc: La première décennie de Mohammed VI", *Afrique du Nord—Moyen-Orient. Edition 2010–2011*. Paris: La Documentation Française.

Geertz, C. (1971) *Islam Observed. Religious Development in Morocco and Indonesia*. Chicago: Chicago University Press.

Gilbert, C. (1992) *Le Pouvoir en situation extreme: catastrophes et politique*. Paris: L'Harmattan.

Hertog, Steffen (2010) *Princes, Brokers and Bureaucrats: Oil and the State in Saudi Arabia*. Cornell: Cornell University Press.

Jeghllaly, M., Bennani, M. (2012) "La dynamique protestataire du Mouvement du 20 février à Casablanca," *Revue Française de Science Politique*, 62(5–6): 867–894.

Radi, S. (2011) "Deux manifestations à Rabat: entre consensus et consensus spontané", *Confluences Méditerranée*, http://www.confluences-mediterranee.com/Deux-manifestations-a-Rabat-Entre

——— (2013) "Voter sans conviction: les elections legislatives du 25 novembre 2011 à Khénifra", *L'Année Marocaine*, 10. Rabat: Centre Jacques-Berque.

Vairel, F. (2004) "Le Maroc des 'années de plomb': équité et réconciliation?", *Politique Africaine*, 96: 181–195.

Veyne, P. (1976) *Le pain et le cirque. Sociologie historique d'un pluralisme politique*. Paris: Seuil.

Winch, P. (2007 [1958]) *The Idea of A Social Science and its Relation to Philosophy*. London: Routledge.

Zartman, W. (1964) *Destiny of a dynasty: The Search For Institutions in Morocco's Developing Society*. Columbia: University of South Carolina.

32

SOCIAL PROTESTS IN MOROCCO[1]

Riot, Emotions and Reasons

Abderrahmane Rachik
King Abdul-Aziz Al-Saoud Foundation, Casablanca, Morocco

The analysis of the recent history of urban social protests in Morocco highlights the evolution of collective actions since the 1970s. These collective actions appear in the form of:

— Classical social movements (workers, employees, civil servants, secondary school students, university students …) action of which takes place within the walls, almost never in the public space.
— Violent, "infectious" and ephemeral riots.
— Emotional or community demonstrations led by political, associative, or trade union organizations.
— New social movements which struggle for values (human rights, women's rights, children's rights, linguistic and cultural rights …), for job (young unemployed graduates) or against socio-space marginality (the small cities).
— Movement of young people, rather political than social, through access to new technologies, which corresponds to what was called "the Arab spring".

How do collective actions and reactions manifest in an authoritarian political system and how do they develop in a context of progressive political openness?

AUTHORITARIAN SYSTEM AND COLLECTIVE ACTIONS

The demonstration in Morocco has been recognized under the Code of Civil Liberties since 1958. The article 13 of this code says that demonstration can be forbidden only if the local administrative authority considers that it is likely to disturb public order.

In spite of this liberal Code of Civil Liberties and in spite of the existence of a union movement relatively autonomous from the state, and the multiparty system since the political Independence of Morocco (1956), the demonstration as protesting collective action was never demanded or practiced as a strategy by social movements and opposition political parties.

Authoritarian political system may encourage from time to time a spontaneous, sudden, ephemeral, but violent and bloody collective reaction of the urban population, including in small cities where the individual is visible and easily identifiable, and where social relations are showing more solidarity, warmth and less utilitarian spirit than in big cities. In an authoritarian system, the accumulation of expectations, more particularly those of the young townspeople, causes an individual discontent which waits only the auspicious occasion to be expressed collectively. Two solutions are therefore possible: the building of underground organised movements (associations, labour unions, political parties) and/or the explosion of recurring riots.

By expressing hate against established social order, some acts of rioters in the Moroccan cities may seem abnormal and irrational. Indeed, rioters attacked trees, utility poles, bus shelters, motorbikes, cars … They also plunder groceries, banks, schools, power spheres … etc. The violent and bloody reaction of the crowd also manifests itself against armed forces who received blocks in the face from the raging rioters. In this sense, the riot becomes an end in itself and not a means to express specific claims.

If the 1980s were characterised by recurring riots in urban areas (in 1981, 1984 and 1990), the 1990s appeared as a stage where new social movements could get organised and enhanced. They correspond to a political openness process. Does the linear transition from urban rioting to demonstration[2] reflect a passage from "non-rational" collective reactions to a "rational" behaviour during the 1980s?

RATIONALITY AND IRRATIONALITY OF COLLECTIVE ACTIONS

Throughout the nineteenth and twentieth century, social sciences explored social behaviours.[3] Roughly speaking, the sociological debate related to social discontent, or even to collective violence, turned around rationality and around irrationality of collective actions.[4] It is implicitly possible to differentiate between the thesis of the irrational rioter and that of rational demonstrator.

At the end of the 19th century, Gustave Le Bon (1841–1931) tried, in a psychosocial approach, to analyse the emotion which guides the collective behaviour of the crowd. He tried to study the fundamental characteristics of the crowd. The latter, he wrote, "is almost exclusively driven by the unconscious."[5] "The individual in crowd is like primitive beings … The fierce destructive instincts are residues of the primitive ages sleeping deep in all of us" (*ibid*.: 25, 29).

Always in the spirit of separating the phenomenon of the (rational) demonstration from that of (irrational) riot, Lewis Coser (1956) differentiates between the realistic conflicts and non-realistic conflicts. The first ones are a means to reach some specific targets fixed beforehand; the second ones, on the contrary, "are not occasioned by the rival ends of the antagonists, but by the need for tension release of at least one of them" (*ibid*.: 56).

In debate around the rationality of collective behaviours of the individual, economist Mancur Olson (1971) chose an explicative model founded on the idea of rational human actors. "Thus the customary view, that groups of individuals with common interests tend to further those common interests, appears to have a little if any merit" (*ibid*.: 2). He suggested that the actors will not join the movement unless they can derive benefits.[6] Thus the actor calculations become as an explanatory source of social mobilization and discontent … "The attraction of group membership is not so much in sheer belonging, but rather in attaining something by means of this membership."[7]

DEPRIVATION AND THE RATIONAL CHOICE THEORY

A new Anglo-Saxon sociological current was obvious in the 1970s, across *Davis* (1971) and *Ted Robert Gurr* (1970). This current opened a new perspective which sought to highlight the possible reasons for the explosion of social protest movements. It revolved around the concept of deprivation.

The hypothesis is related to the enhancement of a social deprivation process, that is to say, the gap between the aspirations of a group of individuals and their perception of their social situation. Ted Robert Gurr analyses deprivation as a state of tension, an expected and refused satisfaction, generating potential of discontent and violence (see Neveu 1996: 40–41). Deprivation becomes the first step towards revolt.

Deprivation theorists develop a sociological rule: "When the people are in their most desperate and miserable condition, they are often least inclined to revolt, for then they are hopeless…. Only after their position is somewhat improved and they have sensed the possibility of change, do they effectively against oppression and injustice. What touches off insurrection is hope, not lack of it, rising confidence, not bleak suffering" (Gurr 2010: 114).

Mohamed Cherkaoui (2005) goes back up to the writings of Tocqueville to maintain that the idea of deprivation and more particularly that of relative deprivation is developed by Tocqueville to explain discontent and uprising in the late eighteenth century.[8] Mohamed Cherkaoui's interpretation from the publications of Tocqueville tries to highlight the mechanisms of deprivation and inflationary spiral of expectations.

Against a predominant Marxist interpretation which searches to explain the uprising on the basis of the economic crises and the misery of the population, a hypothesis appears according to which people are discontented and rebel when they are thriving. If we are to believe the analysis of Synder and of Tilly related to the case of France between 1830 and 1960, “Violence is neither intense nor more expected when the harsh conditions of life is greater.”[9] It isn’t therefore expected to see mechanical causal relationship between the intensity of social discontent and its violent collective expression.[10]

If the researchers refer to Tocqueville, according to Mohamed Cherkaoui, it is for the purpose of putting the emphasis on the following paradox: revolt is made after an improvement of social economic and political conditions. “A strong economic growth and a liberalisation of the feudal institutions lead to general discontent which precedes revolution.”[11]

Relative deprivation reflects a feeling of injustice, but it is based on a principle of equality. Tocqueville explains in *Democracy in America* (*De la démocratie en Amérique*): “If some of my peers benefit from a privilege, I will experience a feeling of injustice; however, when inequality is the common law in society or group where I live, even extreme inequality is tolerable.”[12]

But the deprivation theory does not emphasize on the transition process from individual discontent (sense of injustice) to collective action; nor does it support the nature of the constraints exerted by the political system of collective actions; nor does it attempt to explain the evolution of forms of social protest or the changing nature of collective action.

The sociological literature has been dominated by the identification of factors in the explanation of the revolt of the people (why do people revolt?). During the 1970s, a new framework for analysing social movements emerged in the USA: the resource mobilization theory. In contrast to the collective behaviour theory that looks for the reasons behind group mobilization, this theory seeks how collective mobilization occurs, grows, succeeds or fails (see Offerlé, 1994: 52).

This new utilitarian approach is part of the rational choice model. It examines the mobilizing process of all the resources (money, mass media, community or other networks, symbolic capital, ideology …) in order to build or strengthen a social protest movement.

Collective movements are actions that are determined neither by systemic crises nor by situations of social or spatial marginality, nor by conditions of deprivation felt by their actors. But they are determined by the ability of the latter, when the availability of resources allows organizing demonstrations to defend their own interests.

But this theory explains only half of the phenomena related to collective movement, that is to say the ability to act according to the convergence of interests of a group members with those of an organization to the initiation of a resource mobilization that can benefit the actors and by means of which they are able to give birth and to develop a collective action (McCarty, Zald, 1977; see Farro, 2001: 73). The other half of the explanation lies in the external environment that is, in part, of a political nature at local and national level. The external environment and political opportunities may therefore involve both facilities and difficulties in training and the development of collective actions.

It is just the frame of the study of the social protest in France which Charles Tilly (1986) proposes. It is based upon four main variables: interest, occasion, organisation and action (*ibid*.: 15). He wrote that "revolution poses different problems everywhere according to local interests and organisations" (*ibid*.: 39).

The collective actions theory (see Oberschall, 2000) operates at different dimensions (macro and micro level) which are likely to construct social protests. Macro level refers to local, national, or even international political opportunities favourable to the organisation of social protest (freedom of expression, access to mass media, degree of social discontent, etc.). Micro level highlights the capacity of the actors to achieve social mobilisation, the nature of collective property to demand, the objectives of protest, the costs of participation (physical clash with the police, arrest, torture, threat, condemnation) and the advantages which the protester is going to gain from his participation.

The sociology of social movements and of social protest in general, is linked to the Western World (liberal system). The concept of social movement, as it is defined by Alain Touraine (1993), assumes the prior existence of market and of democracy.

After this short outline on the sociological literature related to collective actions, we are going to focus on the study of the evolution of protesting actions in Morocco

- — from riot to emotional mobilisation, through the use of non-official channels for the organisation of demonstrations, in an authoritarian political system;
- — from testing security devices by social movements which attempt to peacefully conquer the public space to the achievement of its protesters actions in a context of political change.

Since its independence (1956), Morocco knew a clash between the monarchy and the opposition political organisations until 1975, date in which *The Green March* was organized towards the Western Sahara. The eighties were rather marked by the explosion of a series of violent riots in 1981, 1984 and 1990 that shook the small, medium and large cities.

As agents of social and political claims in an authoritarian political system, social movements have not enough resources to be able to exercise their influence on the democratic development in Morocco. As their political weight remains limited and the access to mass media restrained, social movements opt for the street strategy as means of speech, sometimes in violence, to mobilise public opinion[13] and to lobby the political authorities.

Contrary to current organised forms by social protests, riots are characterised by their spontaneity, their fleetingness, their blind violence and the absence of definite objectives. During 1990s which correspond to a political openness process, "rational" forms of large social protest increase and diversify. This is the beginning of installation of demonstrator's action. A new collective strategy of the protesting actors takes shape progressively in relation to the political change process in the country. Police intervention gives way in a "blind" military suppression.

Four factors combine to explain the emergence of large collective actions:

- — A political favourable environment to the building of collective actions,
- — Discontent of the population,
- — Actors' emergence (elite) capable of mobilising resources,
- — The precision of the collective object of claim linked to values, job, accommodation, public utilities …

— Access to media and to new technologies.

The public policy against rural opening up and urban poverty causes perverse effects. “Cities without Slums” programme allowed 200.666 household to benefit from an accommodation as part of slum clearance policies of 2004 until 2012. May be mentioned other large-scale public interventions likely to provoke expectations and hopes, such as the National Human Development Initiative since 2005, development of the region of the Tanger-Med port in the north of the country, the realisation of highways in the north, in the south and east of the country, introduction of trams in Rabat, then in Casablanca (2012).

The situations of social poverty and of space exclusion were lived as “natural” by the population. But the political openness process of an authoritarian system and the relative deprivation caused by a positive collective perception of a possible improvement of living conditions are the first ingredients preparing collective discontent. The hope of a possible change feeds social protest. The inflationary spiral of expectations is likely to boost social discontent.

The stimulating actors (political parties, trade unions, associations) were going to lean and yielded a profit this feeling of deprivation to assure the transformation of a feeling of individual discontent into a social protest. If the feeling of injustice at the level of the individual can lead to riot in an authoritarian political regime, organisation of demonstration, of strike, of sit-in are rather the product of an open political system.

RIOT, A SPONTANEOUS COLLECTIVE ACTION

In an authoritarian political context, the collective action repertoire which was the most widely used as means of social protest was often the sector-wide strike of the civil servants and employees, and that of university students and secondary school students. Social movements have been for a long time in permanent confrontation with political power to the point where they did not even think to use a prior request to the local authorities to be able to demonstrate on the street.

In spite of the political consensus process between the monarchy and the opposition political parties created by a nationalist context (during the Western Sahara conflict in 1975, the opposition political party Socialist Union of Popular Forces, USFP, sought to create other social areas of social mobilisation).[14]

With the creation of Democratic Confederation of Labour (CDT), the repetitive calling for a general strike becomes a new repertoire of collective action which ensures mobilisation and constant social pressure on political power. Each call for a general strike creates a tense atmosphere in the city. So the 1980s knew appearance and repetition of new protesting actions in form of violent riots which completely escaped from the trade union supervision (see Rachik 1995, 1999).

The decision to increase basic food prices by the government in June 1981 had initially corresponded with a social mobilisation of the confederations of trade unions which had called for a general strike. The call for a general strike to protest against this decision created a tense and confusing local situation in dense urban neighbourhoods that were conducive to the outbreak of the riot. The police or the army supervised popular neighbourhoods, merchants closed their shops to avoid looting, employees hesitated to reach their workplaces … etc.

We will try to follow the process of sudden formation of a social explosion in Casablanca to understand better that it is neither about a riot of hunger, nor about a riot of bread, as asserted by several hasty commentators.

In News-Medina, not far from the city centre, a dense neighbourhood, in disadvantaged social contents and where several accommodations threaten ruins, the policemen and their dogs-shepherds were stood in the different street corners. Children began throwing stones to provoke them. A big stone succeeded in touching one of the dogs. After a short police pursuit, a crowd soon gathered on the street corner to defy the policemen. Stones were therefore thrown in all directions.[15] Given the violent police repression, a spontaneous and "ephemeral" solidarity between the young residents was quickly formed against the forces which were responsible for public order.

Riot is the negative version of the rational choice theory. The interest, the organization claims, the calculation of costs and benefits, the actors are all missing. But if riot makes no specific claims or specific actors, it does not mean that it has multiple effects on public policy.

The riot of June 1981 was also an opportunity for the state to rethink its urban policy in big cities (see Rachik 2002a, b), in order to control urbanization and population. It is also a good opportunity for the political power to demonstrate its repressive authority and its ability to maintain and ensure the prompt return of order.

FROM RIOT TO EMOTIONAL DEMONSTRATION

Social mobilization has no longer for object purely political or social demands. It also calls for collective emotions. Recent studies on new social movements have opened up new research avenues. They deal with emotional ties forged by activists or actors who manage to build or sustain a collective identity. This type of emotional movement (see Walgrave and Verhulst, 2006), based on "consensual" feelings of solidarity expresses compassion and identification of victim protesters.[16] Social movements provide emotional or communal social mobilization based on an emotional[17] event (moral shock[18]), or ethno-national.

Some big demonstrations which took place in Morocco in the 1990s consist merely of what is called "catch-all" riot, demonstration appealing nationalist, pan-Arab or Islamic feelings.

After different violent riots of the 1980s, the peaceful conquest of the urban public space becomes a political issue. In the 1990s, we attend the "trivialisation of general strike", launched mainly by CDT. The call for a general nationwide strike no longer creates tense atmosphere in the city. It is no longer perceived as a socially and officially fertile ground to riot.

The first half of the 1990s was a preparatory stage to the demonstrator's action. This phase allowed us to test the reaction of the forces responsible for maintaining order and subsequently to assess the cost of the commitment of the individual in a protest. The strategy of the occupation of the public space was still a very risky way to the extent that the sit-in or walking in the street would face arrests and heavy sentences for protesters, even violent and murderous repression.

The beginning of the demonstrator's action process relied primarily on social mobilization around the pan-Arab Community dimension. It did not even express an internal social protest[19] directly. At first glance, it reflects the feeling of solidarity with the Iraqi, Palestinian, Lebanese … peoples. The earliest forms of social mobilization are made primarily through the organization of festivals (*mihrajane*) and sending press releases. Thus this process leads gradually to the call for a national strike and on attempts to organize sit-ins to finally reach the manifesting actions.

After the Israeli onslaught against Palestinians, 08 October 1990, the Democratic Confederation of Labour (CDT), close to the USFP, called for a demonstration in solidarity with the Palestinian people. The event should leave the seat of the CDT in Derb Omar to the U.S. Consulate. But it was banned at the last minute by the local authorities of Casablanca.

One year after (1991), the Gulf War was another favourable opportunity to put significant pressure on political power. The first major event was authorized thanks to a personal request, therefore informal, by Mr. Mohamed Lahbabi[20] who was a friend of Mr. Driss Slaoui (King's Counsel): "The USFP has charged me to go to Mr. Driss Basri, Minister of the Interior and Information, to tell him that we want to organize a demonstration in Casablanca to protest against the war in Iraq."[21]

Indeed, it wasn't easy for opposition political parties to obtain authorization to organise the demonstration. It was attended by about 700,000 people in the streets of Rabat, according to organizers. Highlighting the Arab nationalist feeling and at the same time the anti-Western sentiment, the mobilization of masses brought together a diverse range of protesters ranging from political parties of the left and extreme left, labour unions, associations … to the Islamist organizations and ordinary citizens.

The Gulf War, as a sudden and ephemeral crisis, was a real test of the political regime. The opposition political parties have succeeded in creating a gap between public opinion and the regime.[22] The discontent of the urban masses takes the form of an internal political protest.

The street occupation is being gradually confirmed both by the old (i.e. trade unions) and the new (i.e. associations) social movements. Young unemployed graduates were the first to express regularly their social protests through sit-ins and hunger strikes in front of the different seats of ministries (such as ministry of education, of interior, of employment, etc.), parliament, prefectures, or simply on the street. But the occupation of the public space by protesters is faced with violent police interventions.

Political changes accompany this process of peaceful conquest of the public space. They are mainly characterized by the adoption of a new Constitution in 1992. This would allow the delegation of some powers of the King to the government and parliament. It also highlights "Morocco's commitment to respecting human rights as they are universally recognized." The new constitutional reform is part of a group dynamic with different waves of release of political prisoners[23] and the return home of exiles in 1994. It also led to the creation of a Ministry of Human Rights.[24]

It is in this continually changing political context that is born young unemployed graduate movement. The demonstration, as allowed and organised collective action, progressively enters the repertoire of national collective actions. Even if they meet systematically the refusal of the local authorities, protest movements succeed in being obvious in the public space. The street strategy spreads widely, in 1998, with the arrival of the government "of alternation".

YOUNG UNEMPLOYED GRADUATES AND DEPRIVATION

After several sit-ins at the headquarters of Moroccan Workers' Union (UMT), the unemployed graduate movement was formed on October 26th, 1991, as national association. In parallel with the unemployed graduate movement which initiates new repertoires of collective protests in public spaces, other young people, who had recently graduated, chose also to advocate collectively for getting a job.[25]

The example of unemployed graduates from a disadvantaged social background is one example of such a deprivation, namely an expected and refused satisfaction. Unemployment experienced by young graduates as a failed social promotion and as a lack of social recognition. Certainly among this social group, there are graduates who resigned and accept their fate, either by permanently remaining unemployed, or by applying to low-paid jobs[26] that don't match their academic skills.

The notion of "*al-hogra*"[27] expresses the social deprivation of certain social categories that are not necessarily poor. This feeling of injustice more and more expressed by young people reflects a blocked social ascension that was expected. The recurrent use of the theme around the concept of "*al-hogra*" is stimulating. The internalization of this feeling among young people is the first step towards rebellion. Some young people are no longer in the classic cultural records related to resignation and acceptance of their social status. They are frustrated and hopeless, and therefore they are likely to express themselves in a violent collective form.[28]

A new fact is the ability to bring together the various urban social problems in the public scene. After the demonstrations of solidarity with other peoples, social movements are gradually highlighting material demands: poor housing, high cost of living, lack of transportation, unemployment, insecurity, high cost of electricity and water, pollution, inconstant collecting of domestic garbage, insecurity, poor quality of life, etc.

At the same time, the new social movements arise and require the issue regarding the scope of values.[29] It is in the public space that they have questioned and highlighted other forms of domination (cultural, linguistic, sexual), new social conflicts, new societal issues by introducing new values. The debate is marked by women's issues (divorce, early marriage, violence against women, child support, etc.) corruption, capital punishment, torture … the cultural and linguistic rights, freedom of expression and all values related to human rights in general, not to mention recently the debate on abortion, homosexuality, fasting, etc.[30]

"THE ARAB SPRING": FROM SOCIAL PROTEST TO POLITICAL CONTESTATION

Urban social protests are no longer limited to material claims (employment, salary increase, improvement of working conditions, the right to strike …) nor to the defence of old or new values (status of women, or language: Berber culture, human rights …)

From February 2011, new claims emerge in the public space. They touch the heart of the political system, namely the political status of the monarchy, the sacredness of the King, the nature of the Constitution, the separation of powers of the executive, legislative and judiciary, the separation of powers, etc. and that of economic activity: corruption, impunity, political domination of some families related to members of the government, etc.

Indeed, the escape of Tunisian President Ben Ali gave a new breath to young Moroccan protesters. The al-Jazeera satellite channel has played a political mobilizing role in different Arab countries by giving more importance to social events, which may have remained marginal.

Being called February 20th Movement, the young Moroccan neo-activists have benefited from national and regional political opportunities. Certainly, the uprising of young Tunisian people was not an inaugural event. The February 20th Movement is the product of a process that dated back long before the "Arab Spring." But it was the event that accentuated the massive mobilization of anonymous individuals, and subsequently led to its political extension.

The young people leading the Movement are unknown. With little power, few resources and little experience and activist skills, they are less publicized in the media and not organized. They suddenly emerge and occupy the virtual public space. They wanted to reproduce the virtual pattern of Facebook in reality. February 20th Movement rejects the notion of spokesperson and of political leader (*zaîme*). The young activists say that every young person who speaks through the mass media represents only himself. The movement expresses itself only through official announcements.[31]

The initiators (the Facebook users) which called for the demonstration of 20th February had calculated the costs of such an "adventure" (the conquest of the public space without prior administrative authorization), namely the fear of the event becoming riots and collective and murderous violence. The reaction of the police force was not foreseeable. The virulent attitude expressed on Facebook by young people opposed to the demonstration of 20th February was also unknown.

In fact, a confused climate prevailed on the eve of the demonstration. The Movement was in full gestation and in full difficulty due primarily to the management of its own internal political contradictions and virulent media campaign against it, qualifying its activists as traitor to the nation, as pro-Polisario, pro-Algerian, against the King, group of kids ("labrahech", "fiffi"), shelter atheists, Christians, homosexuals …

Just before the demonstration of the February 20th, a difference resulted in an open status of the monarchy between online activists (Facebook users) and conventional ones, more particularly those affiliated to the party Annahj Addemocratti.[32] If the first group claimed a parliamentary monarchy (the King reigns but does not govern) according to the first component platforms, the latter, without reference to the monarchy, claimed rather a "Democratic Constitution."[33]

Faced with this ideological confusion, psychological pressure, fear and anxiety of being responsible for any slippage events that would touch at the same time, several Moroccan cities, the *Freedom and Democracy* movement now decided, in extremis, on the February 19, the cancellation of the call for protest.[34]

Obviously the movement has no specific objectives in seeking to keep a balance between too many heterogeneous political movements which cross the February 20th Movement. This Movement allowed a growing visibility and an enhancement of social conflicts during the whole year 2011. It is for the first time that a peaceful massive protest is organized in several cities at once, an average of forty cities every Sunday.[35]

The online mobilization allowed young Facebook users' interest in politics. Online anonymous and fortuitous meetings lead to political demands. Excited by the success of the demonstrations of February 20th and its peaceful nature, conventional activists, led by the president of the AMDH,[36] were keen to organize a second event the next day. The idea of demonstrating every day was however not unanimous within the Movement. The attempt to organize a second event on February 21st was violently repressed by the police.[37]

There are four characteristic features to identify chronologically the February 20th Movement:

— Young Facebook users constitute an online group of several individuals who have agreed on a constitutive platform movement.[38] Developed by a very small group of friends, the platform reflects a variety of slogans with political overtones (parliamentary monarchy, democratic Constitution, cancellation of the Constitution, dissolution of the government and parliament, release of political prisoners …) The Movement asserts its independence from political, labour and religious organizations. Its motto is "people decide through general assemblies."

— To the mobilization of these online young activists are added other structured and organized movements (young and old) who join the February 20th Movement while under construction. They belong to politically structured organizations: Nahj Addimocratti (an extreme left party), the Unified Socialist Party (PSU) and the al-Adle wa al-Ihsane (Islamic Justice and Charity Association), the Berber movement, youth of AMDH,[39] PADS, USFP, PJD,[40] CNI, ATTAC … After deadly conflict between Islamist and leftist students in the various faculties of the country, young online activists were proud to build a space that is likely to abolish the ideological conflicts between political heterogeneous organizations. "Whoever believes in an ideology is an old man," said a young online activist, a former partisan of al-Adle wa al-Ihsane.[41]

— The creation of the National Council of Supporting the Movement, CNAM. It is in principle autonomous from the February 20th Movement. It is intended to accompany and support the movement. This Forum is conducted, among others, by AMDH and PSU.[42]

— All small protest movements seeking to attract the attention of the mass media, participated in demonstrations as of March 20th:[43] *Maarif* bowling association (*Casablanca*) denouncing the presidents of bowling clubs, *Ain Sebaa* slum dwellers claiming the right to decent housing, *Najwa* Association spokesman of the victims of attack dogs, Bachko slum dwellers forced to leave their shanties, unemployed graduates, wholesale traders, *Mohammadia* orphan charities residents (*khiriya*) … etc.

February 20th Movement is invested by well-structured organizations. They don't need to be mobilized, but rather seek to conquer massively the public space and to galvanize as many people as possible, or even create a clash with the regime. Several attempts have been made in the past, but in vain: either they clashed with security forces which prevented the movement to occupy public space,[44] or they failed to mobilize the population in urban areas: *tansiquiyate* (coordination) conducted by AMDH and radical left parties against high cost of living or against the delegated management of water and electricity, etc.).

Politically, the social protest management by the authority has baffled the February 20 Movement. The state has enhanced reforms rather than confrontation and repression. The overwhelming vote in favour of the new Constitution has destabilized the Movement.[45]

Until June, the *al-Adle wa al-Ihsane* association was discreet. It dosed its participation in the demonstrations to avoid being all too visible. The association, "tolerated" by the government, has changed its strategy in the February 20th Movement opting for mass mobilization. Perceived by the public as one of the great manipulators of young online activists of the February 20th, the al-Adle wa al-Ihsane movement gradually confirmed it. It takes out its massive troops in the streets (on June 19th, and on July 3rd and 10th in big cities: Tangier, Rabat, Casablanca) to compensate the mass of protesters who retired after the approval of the new Constitution.

But after the formation of a new government led by the Islamist party al-Adala wa Tanmiya (PJD), the withdrawal of the Islamist movement al-Adle wa al-ihssane was the last blow to the February 20th Movement. The number of protesters gradually decline during the last three events in Derb Ghallef, Sidi Moumen, Derbe Soultane, Sebata in Casablanca, respectively January 1st, 8th, 15th and 22nd, 2012. Movement is depressed, hopeless. It feels isolated and weakened.

The risk of getting involved in further radicalization, even engaging into violence is likely to prevail. The red line has been crossed. For the first time in Casablanca, and in front of the Maarif police headquarter, the slogan "The people want the fall of the system" was repeated heavily towards the end of the demonstration on January 8th, 2012.

The year 2012 recorded, until the end of November 2012, 17,186 protests (demonstrations and sit-ins) in the public space, an average of 52 protests a day. All participants in these protests are estimated at 321,000 people.[46]

The absence of a great social mobilization of the February 20th movement has led to the return of the repression of any sorts of unauthorized occupation of the public space.

NOTES

1. Translated from French by Mohamed Malchouch and revised by Fatima Boumazou.
2. "Demonstration is a collective movement organized in the public space in order to produce a political effect by the specific expression of an opinion or a claim" (see Favre, 1990: 15).
3. As an example, we may mention Alexis Tocqueville, Werner Sombart, Max Weber, Gustave Le Bon, contemporary sociologists as Robert Ted Gurr, Louis Coser, Charles Tilly, Alain Touraine, Albert Otto Hirschman, Mancur Olson …
4. Max Weber (1864–1920) distinguishes four types of motivations which determine social action: adaptation of resources to purposes, the conviction of the superiority of certain values that push their actors to act in a certain way, the weight of tradition, and finally the emotional passions which guide the behaviour beyond all rational actions. Collective actions in *Dictionnaire de la sociologie*. Paris: Albin Michel, 1998. p. 11–19.
5. Gustave Le Bon, p. 17. We will not refer back here to the use of the concept of race by Le Bon to explain variations in the behavior of different kinds of crowds. See the foreword by Otto klineberg in G. Le Bon's *Psychologie des foules*. Paris: PUF, 1981
6. Mancur Olson also argues that "economic incentives are not, to be sure, the only incentives; people are sometimes also motivated by a desire to win prestige, respect, friendship, and other social and psychological objectives". *Idem*, p. 60 in French: "Les mobiles économiques ne sont évidemment pas les seuls qui existent; les individus sont souvent motivés par une soif de prestige, de respect, des amitiés et autres objectifs psychologiques". Olson p. 83.
7. Léon Festinger, mentioned by Mancur Olson, *idem*, p. 6.
8. Contrary to what many deprivation theorists think, according to M. Cherkaoui, relative deprivation is absent from Tocqueville's *L'Ancien Régime et la revolution*, but appears in *La Démocratie en Amérique*, *op. cit.* p. 471.
9. Mentioned by Raymond Boudon (1985: 85).
10. *Idem*, pp. 79–90.
11. Mohamed Cherkaoui think that "this model is more consistent with Durkheim's theory of anomie than with deprivation", p. 466.
12. Mohamed Cherkaoui, *op. cit.* p. 470
13. The rapid expansion of the non-partisan press has also participated in strengthening social movements. Based on the mass media, the protesters actions and sit-ins are included in the public arena by providing visibility or legitimacy and normality to social protest. Different social protests, especially those ending in violent interventions forces are carried by the press at the stage of the event. For

their part, the protesters seek to use other spectacular collective action to attract the attention of the mass media and public opinion.

14. USFP: Socialist Union of Popular Forces. Allied with USFP, the Democratic Confederation of Labour (CDT), was established in 1978
15. It is true that "at the slightest noise people are easily gathered" said a French witness in Mars 1771 (see Nicolas, 2002: 20)
16. "Both rationality and emotions can be found in all mobilization" (see Walgrave and Verhulst, 2006: 281).
17. Emotional social protest was manifested whenever a young from the neighbourhood was killed by police officers (especially with the introduction of the new special task force called Groupement Urbain de Sécurité, GUS (Urban Security Group). After several mistakes and misconducts, police headquarters put an end to it. Human rights associations quickly showed support for the victims.
18. In December 2007, the Islamist movement has called for a demonstration just after Friday prayers to protest against a so-called "gay marriage" in Lakser Lekbir city. The Islamist movement could not provide guidance for a growing population who joined this half-organized and half spontaneous demonstration.
19. The regime and the opposition were convinced that allowing the demonstrations of support for the Iraqi or Palestinian people would pave the way for social and political protests related to internal affairs.
20. Mr. Mohamed Lahbabi is a university professor, a historic leader of the UNFP, National Union of Popular Forces (an opposition party) and then of the USFP. In 2010, Mr. Lahbabi said in an interview with the *Journal Hebdomadaire*, that "about ten years before King Hassan II's death (in 1989?), Mr. Bouabid, Mr. Radi and I had been received by the king in Ifrane to discuss the political situation of the country. Mr. Radi and I had been hosted by Mr. Driss Basri in a large hotel in the city and he told us: 'Our policy is to discuss with submitted people, you must submit to get things!' Today we can no longer say such a thing. There is therefore more hope. . . ." In 1981, we spent six months in prison, with Mr. Aberrahim Bouabid, because, as politburo members of the USFP, we had issued a statement saying that the referendum requested by Morocco was unacceptable." In: http://hichambennani.wordpress.com/2010/01/22/mohamed-lahbabi-%c2%able-makhzen-rabaisse-les-partis-et-les-hommes%c2%bb/#more-911
21. Oral intervention of Mr. Mohamed Lahbabi, in a study day in the memory of the late Driss Slaoui, organized by *King Abdul Aziz Foundation* in Casablanca in 2000.
22. In fact, Moroccan government had officially condemned the Iraq's invasion of Kuwait. It had even sent 1,200 troops to Saudi Arabia to counter a possible attack by Iraq.
23. It should be noted that the first wave of release of political prisoners was held in 1989.
24. This new ministry was headed by Mr. Omar Azzimane, a former president of the Moroccan Organization of Human Rights.
25. The 1995 census of unemployed graduates estimated the number of doctors or graduates having an equivalent degree (engineering) in 2108 persons, 53% of

them with a doctorate, 30% with DES (*diplôme d'études supérieures*) and 17% are engineers.

26. Some graduates (especially those who have received their bachelor's degrees) are employed as night watchmen, newspaper sellers, waiters, etc.
27. "Al-hogra" can be literally translated as contempt, as opposed to dignity.
28. The unemployed graduates movement changes from protest action to individual suicide, then to attempts at collective suicide (by self-immolation) in the public space.
29. The civil society empowerment from the 1990s is another way of doing politics. It expresses a physical (and sometimes ideological) movement of leftists to associations (parent associations, Berber movements, human rights movements, women's movement) most of whom rely on international donor funds.
30. In the city of Mohammedia (30 km from Casablanca), a small group, belonging to middle social classes, was suspected of being behind an attempt to violate the fast in a public place during Ramadan. On September 13th, 2009, the group attempted at planning a forest picnic as a low-key protest against a law barring Muslims from eating publicly during Ramadan's fasting hours.
31. The city of Safi movement, for example, protests against the prohibition issued by local authorities to some activists of the movement who had applied for it: "The movement is for everyone and not just for the youth. The movement has no "representatives."
32. Extreme left political party
33. Cf. Said Benjebli, *The February 20th Movement, from Parliamentary Monarchy to Republic* (in Arabic), in Hespress (electronic journal), Juin 15th, 2011. See also, Ismail Bella ou Ali, *L'idiologie divise le Mouvement du 20 février* (in Arabic)
34. Facebook users talked of pressure from the authorities on Rachid Antide movement to abort the call for protest. Antide was accused of being "sold out" to the authorities.
35. In its first demonstration, the February 20th Movement has mobilized the population of 53 prefectures and provinces, according to the Ministry of the Interior, with varying rates of about 37,000 people. See the MAP (Maghreb Press Agency) on February 21st, 2011
36. Founded in 1979, the Moroccan Association of Human Rights (AMDH) is an activist organization, led by the extreme left.
37. The AMDH president was injured on Monday, February 21st.
38. The political composition and dominance of some political and ideological trends can vary from a local coordination to another. Unlike Tangier coordination for example, that of Casablanca tried to impose somehow the separation of politics and religion. Many conflicts arose during the general meetings and especially during the demonstrations: the politico-religious groups sought to impose their own slogans, their own occupation of space (spatial separation of men and women) and their own banner. Thirty individuals belonging to the *Salafi Jihadiya* group, who joined the tail of the demonstration, were chanting their religious slogans and waving a white flag with the following inscription:

There is no god but Allah.

39. Moroccan Association of Human Rights (AMDH), Party for Democratic and Socialist Action(PADS), Socialist Union of Popular Forces (USFP), Justice and Development Party (PJD), National Congress Party (CNI), Association for the Taxation of financial Transactions and Aid to Citizens (ATTAC).
40. Political party youth groups, including those of PJD and USFP, participated in the movement on their own behalf. PJD has officially boycotted participation in the first demonstration of the February 20th Movement on the grounds that it had not been invited and had not managed to clearly identify people underlying the movement.
41. Mr. Said Benjebli, in Daba TV, Cf. http://www.daba.tv/index.php?idmenu=*3**8*#)
42. After a free debate at the February 23 meeting held at the AMDH headquarters by the Moroccan Democratic Network for the Support of the People (RDMSP), gathering political, trade union, associative organizations, it was created the CNAM, which would eventually harbour the Islamist organization al-Adle wa al-Ihsane to strengthen the protesters. The CNAM Council coordinator is Mr. Mohamed Elaouini, a journalist in the Moroccan Radio and Politburo member of the PSU. The deputy coordinator is Mr. Abdelhamid Amine who is also the AMDH deputy chairman.
43. After the royal speech of 9 March announcing constitutional reforms.
44. This is what the press called "beaches war" against al-Adle wa al-Ihsane Islamists' attempt at conquering beaches during the summer of 2001.
45. Maintaining the organization of the international *Mawazine* festival (and also its attendance success), has undermined deeply the morale of young activists of the February 20th Movement who had previously called for a boycott. The movement was less followed by activists of the major political parties and trade unions who had been called for a vote in favour of the new Constitution. Therefore the movement becomes less and less publicized in the media.
46. See the video statement of the Prime Minister in parliament in December 2012. in: http://www.youtube.com/watch?v=J6KyWAPtLb8&feature=share.

REFERENCES

Boudon, Raymond (1985) *La place du désordre*. Paris: PUF.

Cherkaoui, Mohamed (2005) "L'Etat et la révolution: logique du pouvoir monopoliste et mécanismes sociaux dans *L'Ancien régime* de Tocqueville" in *Tocqueville et l'esprit de la démocratie: The Tocqueville Review / La revue Tocqueville*. Laurence Guellec (ed.). Paris: Presses de Sciences Po, pp. 465–498.

Davies, James Chowning (ed.) (1997) *When Men Revolt and Why*. New Brunswick / London: Transaction Publishers.

El Ayadi, Mohammed (1999) "Les mouvements de la jeunesse au Maroc: l'émergence d'une nouvelle intelligentsia politique durant les années soixante et soixante-dix", in *Emeutes et mouvements sociaux au Maghreb perspective comparée: actes du colloque tenu à Saint-Denis les 23 et 24 octobre 1998*. Paris: Karthala, pp. 201–230.

Elias, Norbert (1973) *La civilisation des moeurs*. Paris: Ed. Calmann-Levy.

Favre, Pierre (ed.) (1990) *La Manifestation*. Paris: Fondation Nationale des Sciences Politiques.

Lebon, Gustave (1981) *Psychologie des foules*. Paris: PUF.

Lewis Coser (1956) *The Functions of Social Conflict*. London: Freedom Press.

Neveu, Erik (1996) *Sociologie des mouvements sociaux*. Paris: La Découverte.

Oberschall, Anthony (2000) "Social movement and the transition to democracy", *Democratization*, 7(3): 25–35.

Offerlé Michel (1994) *Sociologie des groupes d'intérêt*. Paris: Montchrestien.

Olson, Mancur (1971) *The Logic of Collective Action: Public Goods and the Theory of Groups*. London: Harvard University Press.

Rachik, Abderrahmane (1994) "Périphérie, émeutes et politique urbaine, le cas de Casablanca", *Horizons Maghrébins*, 25/26: 224–235.

——— (1995) *Ville et pouvoirs au Maroc*. Casablanca: Editions Afrique-Orient.

——— (1998) "Etudes et recherche urbaines au Maroc", in *Les Sciences humaines et sociales au Maroc: études et arguments*. Rabat, Institut universitaire de la recherche scientifique.

——— (1999) "Sciences sociales et violence collective urbaine au Maghreb", *Prologues* (Casablanca), 16: 19–21.

——— (1999–2000) "En l'absence d'une tradition de protestation sociale urbaine", "Voices from Morocco = Voix du Maroc", *Mediterraneans*, a biannual review, 11: 233–240

——— (2000) "Violence, Etat et conquête de l'espace public au Maroc", in *Empreintes, mélanges offerts à Jacques Levrat*. Rabat: Editions al-Assas/ La Source, pp. 69–86.

——— (2002a) "Casablanca: politiques urbaines et pressions sociales", *Revue Naqd, Revue d'Études et de Critiques Sociales*, 16: 57–67.

——— (2002b) *Casablanca, l'urbanisme de l'urgence*. Casablanca: Imprimerie Najah el-jadida.

Robert Gurr, Ted (2010) *Why Men Rebel*. Boulder/London: Paradigm Publishers.

Tilly, Charles(1986) La France conteste de 1600 à nos jours. Paris: Librairie A. Fayard.

——— (1992) "Réclamer viva voce", C*ultures et Conflits*, 5: 109–126.

——— (2003) *The Politics of Collective Violence*. Cambridge: Cambridge University Press.

Toqueville, Alexis de (1981) *L'Ancien régime et la révolution*, in *Oeuvres complètes*. Paris: Gallimard.

Touraine, Alain (1992) *Critique de la modernité*. Paris: Librairie A. Fayard.

——— (1993) "Découvrir les mouvements sociaux", in F. Chazel (ed.) *Action collective et mouvements sociaux*. Paris: PUF.

Walgrave, Stefaan & Verhulst, Joris (2006) "Towards 'new emotional movements'?: A comparative exploration into a specific movement type", *Social Movement Studies*, 5(3): 275–304.

33

ON THE AUTHORITY OF DISCIPLES

Essay on the Rise of Islamic Fundamentalism and Its Transformation

Hassan Rachik
Hassan II University, Casablanca

Departing from the Weberian heritage, Cherkaoui has significantly contributed to the systematization of the unintended consequences theory. To put it simply, an unintended action is an effect of the system that exceeds the individual intentions and motivations. The message of the prophet, for instance, may change although this change is not intended by the prophet or his followers. It is the structure of the interdependence between the partisans, their divergent interests and motivations, which helps to understand the change affecting the initial prophetic content. All prophets need an organization of their partisans within a community. However, all partisans are not motivated by the same interests. To some of them, administration becomes the primary concern. The routinization of the prophet's charisma and the specific motives of some partisans, who degenerate into prebendaries, affect the revolutionary spirit of the prophetic message (Cherkaoui, 2007: 75–87). Based on this theory, and particularly the idea of the routinization of charisma, Cherkaoui tried to interpret the genesis of Islamic Fundamentalism (Cherkaoui, 2007: 173–196).

The problem I have faced, while studying the genesis of Islamic fundamentalism at the end of the ninetieth century, is partially the opposite in the sense that under determined conditions, the alleged founder of an ideology, concerned with pragmatic and discontinuous projects, does not bequeath a system of ideas but a stock of scattered ideological configurations within which disciples draw, select, transform, in order to elaborate a 'coherent' ideological system. This was the case of Jamal al-Dine al-Afghani (1838–1897) and his disciples who systematized the elements of the fundamentalist ideology known as S*alafia*. The genesis of this ideology will be misunderstood if approached as an implementation of an intended project. Afghani had certainly social and political projects. He struggled to disseminate sciences and rational knowledge, to introduce political reforms in Muslim countries, to advocate Pan Islamism, to dethrone the Shah of Iran, etc. However his projects were discontinuous and contradictory because he was mainly responding to different actors in various political contexts (India, Egypt, Paris, Iran, etc.). He was more absorbed by political performances than by forging an abstract system of ideas that might transcend and organize them. It was his disciples, less affected by the political context, who had the chance to elaborate an ideology that was not totally planned by the master who, nonetheless, was erected as his founder.

The major purpose of this study is to examine the authority of the disciples to adapt and transform the master's ideas according to their preferences. To understand the genesis of the *Salafia* I will examine the reasons that led Afghani not to build an ideological system, then show how his most famous disciple, Muhammad Abduh, elaborated an ideology that was not planned by the alleged founder.

FROM ESOTERIC TEACHING TO POLITICS

Afghani was an extraordinary cosmopolite traveler. He was educated in Iran, Iraq and India. He lived in several countries: Afghanistan (1866–1868), Turkey (1869–1871), Egypt (1871–1879), France (1883–1884), Iran (1884–1885), Russia (1886–1889), etc. He followed the religious and traditional curriculum that he strongly criticized. He had a penchant for philosophy and western sciences. In a speech given in Istanbul in 1870, he compared the human life to a living body, and crafts (*çinâʻâte*) to organs. For instance, the king is associated to the brain which is the center of decisions, agriculture to the liver, and sailing to feet. According to him, there is no life without soul, and the soul of a society is either prophecy or philosophy. His comparison between the prophet and the philosopher gives an idea of his 'heterodox' positions.[1] The prophet is inspired, the philosopher reasons. The prophet commands vary with epochs and circumstances, whereas the philosopher's ideas, based on reason, do not take into account any particular conditions. The word of the prophet is therefore always regional, while that of the philosopher is universal. The philosopher is fallible, the prophet is not (Abduh, in Rida, 1931: 30; Keddie, 1972: 58–80; Pakdaman, 1969: 45–49). It is noticeable that aside from the ritual invocations concluding his speech, Afghani didn't invoke any reference to religious authorities.

Attacked by conservative scholars who reproached him to consider the prophecy as a craft, Afghani was forced to leave Istanbul. In Egypt, where he stayed many years, he continued to disseminate philosophical knowledge in a new and informal way. No educational institution could welcome his kind of teaching. He was overtly attacked by scholars from the Azhar University. At the beginning, his audience did not exceed a small circle of disciples that was strengthened by the arrival of Muhammad Abduh who was upset with the traditional teaching in the Azhar and passionate by rational sciences (*ʻulum ʻaqliya*) (Rida, 1931: 26)

Afghani taught several disciplines such as philosophy, logic, theology (*ʻilm al-tawhide*), mysticism *(ʻilm al-taçawuf*), literature (*adab)*. The content of his teaching was almost esoteric. He discussed several Muslim and Greek philosophers. He dealt with traditional topics such as the eternity (*qidam*) of the world or its creation *(hudûth*), the free will, the knowledge in general compared to the knowledge of God, the attributes of God, the angels, the resurrection (Abduh, in Afghani, vol. i, 1979: 223–422). His ideas but also his lifestyle contrasted sharply with that of the traditional scholar. He frequented public gardens and cafes where he spent many hours, drinking plenty of tea and smoking cigarettes (Abduh in Rida 1931: 35; Keddie, 1972, 81–92).

Afghani switched suddenly from philosophical knowledge to political mobilization. He took openly part of the political scene which was in turmoil. With other Egyptian leaders, he struggled for political reforms (liberty of press, representative system) limiting the despotism of the Khedive. The political involvement of Afghani influenced his intellectual evolution. He took advantage of the raise of journalism to reach a large public. He broke with the esoteric way of teaching and face to face relations to a greater area that the modern media allowed. However, he continued to raise philosophical and theological issues, not in an abstract way as he used to do, but relating them to the political context of his time. Thus his philosophical discourses ended almost always with political harangues. He began to talk about free will, for instance, and concluded by advocating self-government (Pakdaman, 1969: 344–348). In his articles, he exhorted Egyptians to get rid of the despotism of Khedives who treated human being like animals (Afghani, 1879, in Shalash 1987: 62–70)

It was in Egypt that Afghani performed his ideological conversion. The traditional and religious knowledge was reinterpreted, ideologized, so that it responded to new political issues generated by the social upheavals never experienced by the Muslim societies. However within Afghani's rational perspective, the reference to the Koran and the *Hadith* (sayings, traditions of the Prophet Muhammad) was secondary compared to the philosophical legacy. According to his enemies and some journalists, Afghani became an agitator and a tribune. He also became famous and his ideas begun to spread out thanks to his disciples and admirers. He approached people (*'awam*) and adapt accordingly the content of his speeches. He told the Egyptians that they were socialized, for centuries, within slavery and absolutism, that they were under the yoke of many conquerors, that they suffered patiently, with their consent, injustice and humiliation. He reproached them lacking pride and accepting humiliation like a rock that feels nothing. He exhorted them to wake up, to live free like other nations or die as martyrs (al-al-'Anhuri, in Rida, 1931: 46–47; Pakdaman, 1969: 62–64; Keddie, 1972: 92–128). He delivered a speech in which he denounced the British policy, showed that the Khedive Tawfiq was the servant of British ambitions, called for war against the foreigner and to revolution to save the independence of Egypt. His ideas were rather nationalists defending the principle of Egypt for Egyptians. He was arrested and expelled in 1879.

RELIGION AND SCIENCE

During his stay in India, Afghani renewed with teaching to which he dedicated most of his time. The main and frequent topics were related to science, philosophy and religion. To Afghani, science rules the world. Europe could not dominate without it. Agriculture, industry and other resources depend on it. However, philosophy remained greater than any science, because, unlike sciences limited to specific objects, it represented the collective soul of all sciences. Its object is universal. Introducing scientific education without developing the philosophical mind, as was the case in Egypt, led to failure (Afghani, 1982: 102–105). To him, "Philosophy is the escape from the narrow sensations of animality into the wide arena of human feelings. It is the removal from the darkness of bestial superstitions with the light of natural intelligence [...] It is salvation from savagery and barbarism [...] Its aim is human perfection in reason, mind, soul, and way of life" (Afghani, 1983b [1880–1882]: 110).

He blamed Muslim doctors (*'ulama*) for having forbidden the use of useful sciences after having divided science into two categories, the European one and the Muslim one. He contended that science has no connection with any nation and claimed that "those who forbid science and knowledge in the belief that they are safeguarding the Islamic religion are really the enemies of that religion. The Islamic religion is the closest of religions to science and knowledge, and there is no incompatibility between science, knowledge and the foundation of the Islamic faith" (Afghani, 1982: 107). Science should not be cut from the philosophical mind that can be inspired by Islam. Pragmatic and aware that religion is at the centre of education within Muslim communities, Afghani advocated that the reform should first focus on the religious elite that continued to dwell in the past and ignore its contemporary society. He was against any reform that aimed to exclude or marginalize religion. To him, Muslims, in their state of distress, should believe in miracles, hell, etc. Religious beliefs are sources of fear and encouragement. He invoked history to show that religion in itself was not the cause of the decline of Muslims. The idolatry of Hindus, Egyptians and Chaldeans did not prevent them to progress in science and industry. The fact that Greeks venerated thousand of Gods did not prevent them to excel philosophically and to dominate politically their region. The only harmful religion is a religion that opposes the acquisition of sciences. It is noticeable again that Afghani defended religion far away from any religious rhetoric. He wanted to demonstrate rationally the necessity of religion. He stressed on the function of religion as a motivation force, and on history to show that false and absurd beliefs are not an obstacle to technical progress (Afghani, 1983c [1880–1882]: 127–128).

In an article on the causes of weakness of Islam, Afghani highlighted two Koranic verses, an act that was rare in his works. He contended that the Koran contains everything humans need, that it is an eternal guide that tells the truth. He recalled the supremacy of Muslims in the past in many domains such as art, sciences and war. The reasons of this greatness lied in the fidelity of Muslims to their commitments to God. The reference to the lack of science as an explanation of the regression of Muslims is not exclusive; Afghani invoked also the looseness of faith religion though timidly. The weakness of Islam was also due to the remoteness of Muslims from commitments made at the beginning of Islam. This idea that will be at the centre of the Salafia was barely outlined (Afghani, 1969 [1880–1882]: 268–274).

During his stay in India, the major goal of Afghani was to show the compatibility between religion and modern science. However this was done without referring, or nearly, to any religious authorities. This is a permanent rhetoric trait of Afghani's works. It is paradoxical for an ideology presented as religious to see his founder referring rarely to religious and authoritative arguments.

ADVOCATING PAN-ISLAMISM

During his stay in Egypt, Afghani discovered the French writer François Guizot (translated into Arabic). He was attracted by his insistence on reason and social solidarity as a source of progress, and his conception of Protestantism as a decisive break that led Europe to progress. Afghani thought he was a Muslim Luther. His plan was to convince his audience that the religious reform is the only way to other material reforms (industry, economy, etc.) (Keddie, 1972: 95).

After India, Afghani lived in Paris (1984) with Abduh, his most faithful and productive disciple. He planned to publish the well known magazine "*The Firm Bond*" (*al-'Urwa al-wutqa*). This was an intensive experience that cemented his new Pan-Islamic project. The name of the journal is inspired from a Koranic verse recommending to Muslims to be firmly bound.

In many articles, Afghani and Abduh focused on the strength of the religious bond compared to the national or the linguistic one. Muslims, whatever their country, rejected their nationalities and any kind of solidarity except the Islamic solidarity (*'uçba islâmiya*). Any one impregnated by Islam does not need his nationality and his people. Are invoked a *Hadith* which prohibits the *'açabia* (tribal bond) and a famous Koranic verse that focuses on piety as a criterion of evaluation between Muslims. The history of Muslims taught that only religion linked them. That's the reason why Arabs didn't deny the Turkish authority, and Persians accepted the Arab sovereignty. The nationality of the ruler didn't matter unless he applied the religious law (*char'*) (Afghani and Abduh, 2002 [1884]: 103–106).

Although relatively more frequent than before, the reference to religious authorities was neither unique nor central. It can be said then that religion became central but not the style of argumentation, the rhetoric, that remained rather 'secular', rational and philosophical. In short, religion is advocated but not essentially in religious terms. The unity of Muslims is justified in the same way that were the nobility of science and the superiority of philosophy, referring less to religious rhetoric and trying to convince through rational argumentation. Afghani and Abduh did no longer consider the dissemination of science as the ideal solution against the decadence of Islam. Muslims were far from knowing how sciences were planted, irrigated, and in what type of soil. Therefore learners will reap only the appearance of truth. It's like a mother who, enjoying some meal, wants to share it with her baby who, supporting only milk will get certainly sick. Without rejecting or opposing the acquisition of science, Afghani and Abduh advocated that the remedy of Muslim society lies in the return to the rules of Islam as they were at its beginning. It is religion rid of heretical innovations that will give Muslims the strength of the union (Afghani and Abduh, 2002 [1884]: 107–105; 116–121; 131–139).

Shortly before he died, Afghani continued to assert that only a religious movement could ensure the passage, made in Europe, from 'barbary' (*al-khuchûna*) to civilization (*madania*). To him, Luther, his favorite example, initiated a reform that conducted Europe to civilization. He recalled that his project was to disseminate among the public (*al-jumhûr*) the true religious beliefs and extract from the minds of the common people and its elite the false ideas such as believing in destiny means inaction and submission (Rida, 1931: 82–83).

FROM ARGUMENT TO PAMPHLET

After the Pan-Islamic experience which lasted eight months, Afghani had many adventures that were mainly political and, ideologically, far from the strategic return to the purified Islam. Abduh returned back to the Middle East, Lebanon then Egypt, to establish his own projects.

In Persia, Afghani frequented, as he had used to do, the political elite. He might have organized secret meetings to disclose his political ideas about the reform of despotism and the need for a constitutional republican government. He was expelled in 1891 (Pakdaman, 1969: 135–155; Keddie, 1972: 320–334). From Iraq, he sent his texts to the magazine *Diya al Khâfiqayn* (*The light of the two hemispheres*) created in London in 1892. The Shah and his regime became his favorite target. His style changed and shifted sharply from the rhetoric of argumentation to that of pamphlet and diatribe. He qualified the rulers as hungry hyenas, criticized the arbitrary regime, the corruption as a mechanism of administration and power, the torture, the fear of people and their exodus abroad, etc. (Afghani, 2002 [1892]: 85–86). His political activism was more obvious and direct. In an open letter, he urged Persian doctors to depose the Shah and show that obeying him was illicit. The style is violent, the content openly political and subversive. He treated the Shah as a viper, tyrant, authoritarian, criminal, humiliated Pharaoh, etc. He accused him of having sold a Muslim country (*dar al-islam*) to the foreigners (Afghani, 2002 [1892]: 63–68).

ACTIVIST DOCTORS

Afghani and Abduh represent an unprecedented figure in the history of Islam. They were not doctors in a traditional sense, but activist doctors. Like intellectuals seen as the advocate and promoter of an ideology, the activist doctor doesn't only aim to disseminate religious knowledge, but also to act on the world in order to implement his ideals. However, it is not activism as such that was new, the history of Muslim societies knew different forms of activism (*jihad*, *mahdism*, etc.). Traditional activism was intermittent and sporadic (conquest of power, rebellion, war…) whereas the activism of Afghani and his disciples became a sustainable and systematic way of life. Furthermore their activism related more to social and political issues than to theological and metaphysical topics. Afghani and Abduh were aware of the differences that opposed them to the traditional figure of the doctor. To them, a doctor should know religious sciences but also the sciences of his time and the situation of their people. Afghani was seen, by many contemporary observers, as a radical, a 'free thinker of the French type' (Keddie, 1972: 144–145). Orabi, an Egyptian political leader, said that "Sheikh Abdu's head was better fitted to a hat than to a turban" (in Kedourie, 1969: 12). Rachid Rida summed up as follows the conversion of his master, Abduh, to activism: it is Afghani that released him from the nonchalance of his Sufism and his Azhar's education and led him to the areas of effort (*jihad*) in order to achieve religious innovation and social reform (*mayâdîne al-jihâd fî sabîl al-tajdîd al-dînî wa al-içlâh al-ijtimâ'î al-madanî*) (Rida, 1931: *Th*). In this context, the word 'jihad' means the notion of 'activism'.

The emergence of the new activist status should be linked to the rise of the public in its modern sense. The latter emerges when the members of a traditional society, or a significant number of them, are no longer condemned to political passivity. This happened wherever there is a possibility for a person to adhere to a new system of ideas regardless of his locality, religious order, social class or nationality (Walzer, 1970: 2–12; Rachik, 2009: 351–353). This broke with the state of traditional communities where tribesmen or peasants relied, politically and economically, on religious lodges and holy men who contributed to the maintenance of social order. Cherkaoui showed the elective affinities between popular Islam and social morphology, and more specifically the social base which the religious fraternities represented (Cherkaoui, 2007: 175–179).Within this traditional structures, people were deaf to any propaganda accusing the saints and religious lodges. They were not ready to listen to any reformist preaching. Adopting reformism would have led to social disorder. At the turn of the twentieth century tribal religiosity begun to lose its appeal. The change of traditional structure (powerful state, centralized administration, labour migration, trade by lorry, etc.) had made shrines, holy lineages and fraternities far less important to people. It is after these changes occurred that the soil became receptive to reformist ideas and people could listen to the preaching of reformists. Holy men could no longer perform their traditional functions such as providing mediation in feud cases, witnessing collective oaths and supervising local elections. Under the new circumstances, the saints lost their traditional functions. The socio-morphological change contributed to the decline of the popular Islam and the resurgence of Islamic fundamentalism (Gellner, 1985: 159–161; Cherkaoui, 2007: 179–182; Geertz, 1971, 17–22, 48–62; Rachik, 2009b: 9–10).

Afghani begun by forming circles of partisans, a new form of interaction that broke with the traditional way of disseminating knowledge. In Egypt the change was radical in the sense that it affected the space, the status of partisans, and the content of teaching. Afghani attended until dawn, a well known café in Cairo, al-Bousta, where he holds his congregation (*majlis*) attended, in a form of a semicircle, by linguists, poets, chemists, historians, engineers, etc. Some of them were not Muslims (al-ʻAnhuri in Rida, 1931: 44–45; Kedourie, 1966: 18–19, 30, 83). They come mostly from 'civilian universities', which valued, according to Rida, the autonomy of thought. Those who came from religious institutions were rare to follow his teaching. Rida reported that there was quite civilians (*madaniyine),* those who adopt the western way of wearing, and few turban carriers (*mu'amamîne*) (Rida Tarikh, 1931: N). The public of Afghani was limited and recruited among educated people. The demand for reforming religion and society originated mostly from those generations who went to modern schools, knowing that within Muslim societies teaching was focused on religious sciences. We can speak of an elective affinity between those with new social status free of traditional structures and particularly traditional education on the one hand and the type of rational knowledge delivered by Afghani on the other (see Cherkaoui, 2007: 44–52). The audience exceeded gradually the circle of partisans and continued to grow to reach the size of 300 members (Abd al-Razik, 1927: 6). This affinity between new kind of reformers and new kind of public was necessary to the raise of Islamic fundamentalism.

Despite the elitist content of their ideas, the rise of journalism allowed Afghani and his disciples to reach a wider public of readership. The press enjoyed then a certain freedom in Egypt (Hourani, 1991: 303–304). The famous newspaper Al-Ahram was founded in 1875. Afghani himself contributed to the emergence of several newspapers. He pushed and initiated some of his followers, notably Abduh, to write literary, social and political articles. Journalism, and the new style of writing that it imposed, dug deeply the gap between the activist reformers and traditional doctors. However Afghani and Abduh remained influenced by the traditional idea opposing the elite (*khâsa*) and the common people (*'âmma, 'awâme*). Their partners were the elite in general and the political one in particular. The mobilization of masses did not suit their activism. They wanted to reform their way of thinking without associating them. Afghani was closer to the solitary reformer who counted on the prince and avoided any mass political organization. Abduh hated the *'amma* and criticized Orabi's revolt because it had mobilized the masses. He could not understand how it was possible to associate people, pejoratively named (*sa'alik*, *sûqa, ra'â'* ...) to the prestige and the glory of the elite. He found that it was not wise to give people something to which they are not prepared (Abduh, [1881] 1979, vol. i: 316–317).

It was almost at the end of his life (1897) that Afghani expressed, in a letter sent to a friend, his regret to not having had recourse to the people:

> Would it be better if I sow the seeds of my ideas in the fertile lands of popular thought rather than in arid royal courts? Everything grows and flourishes in the first and all rot in the second. In fact none of my proposals was accepted by the sultans of the East because ignorance and ambition prevented

them to listen to me (my translation, Afghani, in Pakdaman, 1969: 326).

Even within an elitist level, the nomadic and cosmopolitan life of Afghani did not allow him to gather regular partisans and organize them into a community. The circles he created in Egypt, India, and Iran were fragile and ephemeral. Like a rolling stone, Afghani was too mobile to gather moss.

THE AUTONOMY OF THE DISCIPLE

Abduh was 22 years old when he met Afghani for the first time. In Egypt and France, he accompanied him in all his activities and adopted his rational thought and political decisions (creation of the National and independent party, adhesion to freemasonry, etc.) The influence of the master was strong and evident. In his first articles, Abduh advocates the benefits of the writing, knowledge, logic and new sciences. Logic, for instance, is presented as a set of propositions that strengthen the religious rules on the basis of rational arguments. He regretted that the logic was treated as a science of illusions and deviations. He stressed the utility of arguments and proofs that should consolidate what the ancestors had transmitted, otherwise their legacy would be fragile. Related to the new sciences, he criticized the doctors who found them useless, and who continued to work on antiquated issues without paying any attention to the ongoing changes. The western world became strong and rich thanks to the development of sciences. For Muslim countries, the first obligation must be the dissemination of sciences (Abduh, [1876] 1979, vol. iii: 9–14 ; [1877] 1979, vol. iii: 15–22). It should be noticed that, following his master, Abduh referred rarely to religious and authoritative arguments.

After the expulsion of Afghani from Egypt, Abduh dealt with various topics related to people's daily life. For instance, he praised the benefits of saving, of the good financial management, and criticized prodigality. He invoked the Prophet Muhammad who has recommended the saving and the Koran that promoted the fare balance. He embodied progressively the role of the social reformer by addressing several issues related to corruption, marriage, polygamy, divorce, etc. (Abduh, vol. ii: 13–15, 68–95, 116–129). He also criticized what he considered as heretical innovations (*bid'a*) such as the use of drums in ceremonies celebrated in mosques, and screaming during funeral ceremonies. In these cases, his arguments were mainly religious stressing the lack of local customs to any basis in the Koran and the tradition of the Prophet (Abduh, [1880] 1979, vol. ii: 25–29, 53–59, 141–147).

Abduh expressed his relationship with Afghani in terms of worship. This is evident in his autobiography. In a letter written in 1883, he wrote: "… the spirit of your wisdom which you have resuscitated what was dead in us, illuminated our minds, and graced our spirits, nay, the spirit through which you have dwelt in us and been made manifest in our persons, so that we were your numerals and you were the One, we the absence and you the witness". This letter is full of expressions and metaphors indicating a traditional content of disciple/master relationship: "At any rate, the letters received by the lord from his slave are nothing but a kind of prayer and supplication." "As far as concerns us, I understand the situation of my lord. Even though his eloquence is powerful enough to make angels doubt the object of their adoration and prophets their inspiration" (This passage was censured by Rida; in Kedourie, 1966: 66–67, 9–11).

Afghani's thought is heterogeneous and contradictory, and no disciple could embrace it totally. Despite the feeling for his master, Abduh drew his own way. After his return to Egypt in 1889, he was appointed a judge then the Mufti of Egypt, the most prestigious title for a doctor, which he held until his death. He rejected the political dimension of Afghani's projects (Pan Islamism, political reforms) and stressed the moral education of individuals and society. Divergence with his master concerned what should be transformed and how. Abduh had no passion for direct political action. He did it under the influence of his master. In Paris he confessed his master his despair toward political and revolutionary action. He suggested to him to establish a school for the training of leaders and reformers. But Afghani mocked his utopian ideas and said that he was simply discouraged (Abduh, 1979, vol. i: 282–284). Abduh confessed also to Rida that Afghani was a man of science who would have greatly contributed to the implementation of teaching, he regretted that he unfortunately devoted all his time to politics. According to Rida, Afghani saw that the path of teaching and education was too long, and that the fastest way consisted in reforming governments (Abduh, [1898] 1979, vol. i: 69, 683).

Abduh diverges from his master on the question of political activism, a crucial dimension to any ideology. The master did not like the position of Abduh toward British policy in Egypt. He criticized him and even reproached him to be coward (Amara, 1979: 17–32). In Fact, as a condition to his return to Egypt, Abduh promised to British rulers to renounce to political action and to any political reform. Henceforth, he devoted his efforts to the religious and linguistic reforms. The purpose of his project, of his predication (*da'awa*), is "to liberate thought from the shackles of imitation (*taqlîd*) and understand religion as it was understood by community before dissension appeared; to return, in the acquisition of knowledge, to the first sources, and to weigh them in the scale of human reason, which God has created in order to prevent excess or adulteration in religion [...] religion must be accounted a friend of science, pushing man to investigate the secret of existence..." (Hourani's translation, 1991: 307–308; Abduh, in Rida, 1931: 11). Abduh believed that the renaissance (*nahda*) of the Orient should be built through education and liberation of spirits from imitation and superstition and not by constitutions, nor by political freedoms, representative institutions or mobilization of masses. He advised doctors to reject political action considered as an illusion and to avoid dealing with public policy (Abduh, 1979 [1903], vol. i: 706–707). However, he continued to use the rational approach inspired by his master.

The status of reason (*'aql*) was central to his religious reform. He contended that the comments and the exegesis of the predecessors (*sabiqine*) should be put aside, because the contemporary science progressed and this progress must be taken into account. He wanted to read and hear the Koran as it was heard during the period of the Prophet without taking into account the predecessor's comments (Abduh, 1979, vol. i, 242: 603). In this regard even the word *salafi* is not appropriate. He was not following the path of the *salaf*, he aimed to read the Koran without their help. He said "... I am interested in finding proofs, not in chaining myself to any one form of received belief" (Amin, 1953: 19).

The unity of God (*tawhid*) was a dominant key concept in his religious reform (Abduh, 1979, vol. iii: 353–476). It is a theological issue that has social consequences. He tried to convince the elite and people that the shrine's visit is against the principle of the unity of God and that doing so is idolatry (*wataniya*). To believe that so and so (even the Prophet Muhammad) has power and can intercede with God is qualified as associationism (*ichrak*, *chirk*) (Abduh, 1979 [1904], vol. iii: , 513–514; Abduh, 1979 [1898], vol. iii: 525–528).

Abduh did not aim to reform the social stratification that he took into account in his educational project. The society is composed of three classes (*tabaqâte*): the common people (*'amma*, artisans, traders, farmers…), the *'ulama*, and the administrative/political elite. Each of these classes must have separately an appropriate education. Abduh was leader of a charitable organization which was concerned with the mass education. He believed that the son of a carpenter should be a carpenter, and that the difference with his father consisted in the perfection of his craft that would improve his income. He accepted social mobility but only for the geniuses (Abduh, 1979, vol. iii: 77–87).

Abduh and his disciples neglected philosophical traditions that continued to develop in Iran (Keddie, 1972: 86). Pythagoras, Plato, Aristotle and others who were invoked by Afghani disappeared from the Arabic fundamentalist discourse. From the master's legacy, Abduh retained and developed mainly three topics: the importance of reason, the return to the *salaf*, and the compatibility between religion and science (Afghani contended also the opposite in his response to Ernest Renan). Abduh gave clear boundaries to Islamic fundamentalism which will be recalled again and again by his disciples. Abd al-Raziq, for example, sum up the religious reform of Abduh as follows: to liberate thought from imitation so that reason has no other authority than that of argumentation (*sultân al-burhâne*), to be free from the control of religious and political leaders; to regard religion as a friend of science; understand religion in the manner of the *salaf* before the appearance of the discord (Abd al-Raziq, 1927: 20–21). It is this kind of repetitions or redundancies that progressively simplify and determine the content of an ideology. Afghani will be known either as an ideologist of Pan-Islamism or merged with his disciple into a single mold of *salafia*. For their parts, most of the disciples of Abduh marginalized the educational and linguistic reform of their master.

What makes possible the autonomy of disciples? In traditional societies, the master bequeathed to his followers a set of homogenous beliefs and rites. Normally, a disciple should wait for the death of his master to elaborate his own path. But it happened that the master asked a strong disciple to migrate to another place and create his own community (a lodge, a Sufi order, etc.). In contrast, Abduh as a disciple had more chance to be critical and autonomous vis-à-vis his master. This was certainly favoured by the heterogeneity of the master legacy. However, even in this case the authority of the master might be strong and leave no room, no opportunity to any disciple's initiative. We know that Abduh was driven in projects about which he was not convinced. Not sharing all the ideas of the master was a crucial condition that was strengthened later on by the absence of the master and particularly by the openness of modern social structures. In modern societies, the opportunities to access to authority, far away from the submission to the master, are numerous. Abduh took advantage of the structures of the modern state. The new institutional sources of authority (judge, *mufti, president of an association* …) contributed significantly to the intellectual autonomy and authority of Abduh.

Afghani and his disciples faced traditional religious and cultural systems. Their successors (Muslim Brotherhood, *salafia jihadiya*…) struggled against the new established ideologies (fundamentalism, nationalism, Arabism, communism), rather than against the loose and disintegrated local traditions. I am continuing to examine how disciples and successors transformed, during the last century, the legacy of their masters and predecessors. Having in mind the works of Afghani and Abduh, it is easy to notice the process of simplification of Islamist ideologies. Islamist activists and intellectuals who are mushrooming and their public who is getting larger need few ideas, few slogans, and few emblems. There is no need to write books and edit journals, as earlier ideologists did. What is at stake, what needs to be changed first is not the Muslim thought, but the Muslim and non-Muslim 'corrupt powers'. Hence the style is very concise, apodictic, less argumentative, and close to common sense. Media supports reflect these features: *fatwas*, pamphlets, declarations, tracts, etc. What are needed are not rational and complex ideas but badges that indicate one's ideological identity (a slogan, a manner of greeting, a way of dressing and praying, etc.).

NOTE

1. Regarding the mysteries and controversies surrounding the thought and way of life of Afghani (unmarried, unorthodox, irreligious, …) see Abduh, in Rida (1931: 35); al-ʿAnhuri, in Rida (1931: 49); Kedourie (1966) and Keddie (1972).

REFERENCES

Abd al Raziq, Mustafa, (1927) "Introduction", in Muhammad Jamal (ed.), *Sayyid Jamal al-Dine al-Afghani and Cheikh Imam Abduh* [in Arabic]. Cairo: al-Matba'a al-Rahmaniya.

Abduh, Muhammad (1979–1980) *Complete works*, 3 vol., [in Arabic], edited by Muhammad Amara. Beirut: al-mouassasa al'arabiya li-addirasate wa al-nachr.

Abduh, M., (1931) Autobiography" [*sira datiya*], in Rachid Rida (ed.), *The History of the Imam Cheick Abduh* [in Arabic]. Cairo: Dar al-Manar, pp. 9–25.

——— (1931) "Sayyid Jamal al-Dine al-Afghani biography" [*tarjamat*], in Rachid Rida (ed.), *The History of the Imam Cheick Abduh* [in Arabic], Cairo, Dar al-Manar, pp. 27–37.

Afghani, Jamal al-Dine (1969 [1880–1882]) "Des causes de la faiblesse de l'Islam", in Homa Pakdaman (ed.), *Djamal-ed-Din Assad Abadi dit Afghani*. Paris : G.-P. Maisonneuve et Larose, pp. 268–274.

——— (1979–1981) *Complete works*, 2 vol., [in Arabic], edited by Muhammad Amara, Beirut: al-mouassasa al'arabiya li-addirasate wa al-nachr.

——— (1983a [1882]) "Lecture on teaching and learning", Albert Hall, Calcutta, in Nikki Keddie (ed.), *An Islamic response to imperialism : Political and religious writings of Sayyid Jamal ad-Din al-Afghani*, Berkeley: University of California Press, pp. 101–108.

——— (1983b [1880–1882]) "The Benefits of Philosophy", in Nikki Keddie (ed.), *An Islamic response to imperialism : Political and religious writings of Sayyid Jamal ad-Din al-Afghani*, Berkeley: University of California Press, pp. 109–122.

——— (1983c [1880–1882]) "Commentary on the commentator", in Nikki Keddie (ed.), *An Islamic response to imperialism : Political and religious writings of Sayyid Jamal ad-Din al-Afghani*, Berkeley: University of California Press, pp. 123–129.

——— (1987) "The authoritarian Government" [in Arabic, "*al-Hukuma al istibdadiya*"), *Miçr*, 14 February 1879, in Jamal al-Dine al Afghani (ed.), *Texts presented by Ali Shalash* [in Arabic]. London: Riyad El-Rayyes Books, pp. 62–70.

——— (2002 [1892]) *Diya al Khafiqayn,* edited by Hadi Khasrochahi. Cairo: Maktabat al-chourouq al-dawlia.

Afghani, J. and Abduh, M. (2002 [1884]) *al-Urwa al wuthqa* [in Arabic], edited by Hadi Khasrochahi. Cairo: Maktabat al-chourouq al-dawlia.

Amin, Osman, Muhammad Abduh (1953) transl. [from Arabic] by Carles Wendel. Washington: American Council of Learned Societies.

Amara, Muhammad (1979–1980) "Introduction", [in Arabic], in Abduh, M., *Complete Works*, vol. I. Beirut: al-mouassasa al'arabiya li-addirasate wa al-nachr.

al-'Anhuri, Salim (1931) "Sayyid Jamal al-dine al-Afghani biography" [*tarjamat*], in Rachid R. (ed.), *The History of the Imam Cheick Abduh* [in Arabic]. Cairo: Dar al-Manar, pp. 42–49.

Cherkaoui, Mohamed (2005) *Invisible Codes: Essays On Generative Mechanisms*. Oxford: The Bardwell Press.

——— (2007) *Good Intentions. Max Weber and the Paradox of Unintended Consequences*. Oxford: The Bardwell Press.

Geertz, Clifford (1971) *Islam Observed, Religious Development in Morocco and Indonesia*. Chicagoe: The University of Chicago Press.

Gellner, Ernest (1985) *Muslim Society*. Cambridge: Cambridge University Press.

Hourani, Albert (1991) *The History of the Arab Peoples*. Cambridge, MA: The Belknap Press of Harvard University Press.

Keddie, Nikki (1972) *Sayyid Jamal ad-Din "al-Afghani": A Political Biography*. Berkeley, CA: University of California Press.

——— (1983) *An Islamic response to imperialism : Political and religious writings of Sayyid Jamal ad-Din al-Afghani*. Berkeley, CA: University of California Press.

Kedourie, Elie (1966) *Afghani and 'Abduh: An Essay on Religious Unbelief and Political Activism in Modern Islam*. London: F. Cass.

Pakdaman, Homa (1969) *Djamal-ed-Din Assad Abadi dit Afghani*. Paris: G.-P. Maisonneuve et Larose.

Rachik, Hassan (2009) "How religion turns into ideology", *The Journal of North African Studies*, 14(3): 347–358.

——— (2009–2010) *Moroccan Islam? On Geertz's Generalization*, Archivio Anthropologico Mediterraneo, On line, Anno XII/XIII, no. 12 (2).

Rida, Rachid (1931) *The History of the Imam Cheikh Abduh* [in Arabic]. Cairo: Dar al-Manar.

Walzer, Michael (1970 [1965]) *The Revolution of the Saints: A Study in the Origins of Radical Politics*. New York: Atheneum.

34

INVISIBLE CODES OF TERROR[1]

A Sociology of Political Violence

Domenico Tosini
Department of Sociology and Social Research, University of Trento, Italy

1. INTRODUCTION

This paper identifies the most important generative processes of Sunni jihadists' terrorist campaign in Iraq between March 2003 and the end of 2007, focusing on al-Qaeda in Iraq (AQI)'s strategy, local support and militancy. We outline a framework inspired by recent developments in the analytical sociology (for an overview: Hedström and Bearman, 2009; Hedström and Yliloski, 2010; Manzo, 2010, 2012; Boudon, 2012; Demeulenaere, 2012), including Mohamed Cherkaoui's contributions to the epistemological and methodological aspects of explanations based on generative mechanisms and his analysis of Islamic fundamentalism (Cherkaoui, 2005, 2007). This requires examining links between macro and micro levels involving a plurality of agents responsible for the Iraqi terrorist campaign. We take into account the following agents: AQI and its allies within the Sunni Arab insurgency; their collaborators from the local Sunni Arab community; and AQI's active militants, especially suicide bombers from the Middle East.

In addition, such agents should be viewed as part of three sets of social or generative mechanisms, referring to the most important conditions, motivations, and social interactions underlying the Iraqi terrorist campaign (for the notion of social mechanism: Hedström and Swedberg, 1998; Barbera, 2004; Cherkaoui, 2005; Hedström, 2005; Elster, 2007; Hedström and Yliloski, 2010; Manzo, 2009, 2010; Demeulenaere, 2011, 2012; a notion clearly inspired by Coleman, 1990). They are: situational mechanisms concerning agents' constraints and opportunities associated with the Iraqi political, religious, economic, and military context; action formation mechanisms concerning those agents' decision-making; and transformational mechanisms accounting for the interactions between the agents and for the emergence of the Iraqi campaign as the originally observed macro-outcome.

Correspondingly, we show how AQI and its allies that operated within the Iraqi battlefield were able to exploit political opportunities determined by the 2003 Anglo-American invasion of Iraq and instrumentally employed terrorist tactics to purse operative goals associated with an asymmetric warfare (Section 2). On the one hand, such armed groups could gain support from the Sunni Arabs who were marginalized by the Shiite Arabs-dominated regime that followed the collapse of Saddam Hussein's dictatorship (Section 3). On the other, AQI and its allies based their propaganda on political and religious narratives legitimizing violent jihad against occupiers of Muslim lands in order to recruit fighters, including suicide bombers, from Iraq and other Muslim countries, especially from the Middle East (Section 4). As for collaborators and fighters involved in the insurgency orchestrated by AQI, the paper argues for moving beyond the assumptions of the rational choice theory and adopting a more general paradigm of rationality, which also takes into account the role played by emotional distress, tribal allegiance and religious beliefs in specifying mechanisms of their decision-making and action formation (here we refer mainly to the general theory of rationality elaborated by Boudon, 2003, 2005, 2007, 2009a, 2009b, 2010; see also Cherkaoui, 2007).

2. AL-QAEDA'S TERRORIST CAMPAIGN IN IRAQ

Our attempt to explain the Iraqi terrorist campaign (as the originally observed collective behaviour) requires examining the multiple concatenations of actions and interactions involving the three kinds of agents mentioned above. As stated by Mohamed Cherkaoui,

> As a model that abstractly reproduces the phenomena that are to be explained, the generative mechanism provides an interpretation in terms of individual behaviour. It takes social actors who are generally individuals as the social atom, and by doing this excludes structures and avoids by the same token any tendency to reification. Sociological explanation is only understandable because it deals with intentions, with the causes or reasons and outcomes of the actions of these individual agents (Cherkaoui, 2005: 106).

Our first agent to be considered consists of AQI organization and its elite members. To understand their decisions, we distinguish four main strategic objectives pursued by AQI and its allies. First of all, nationalist objectives—that is, the liberation of territories associated with ethnic and/or religious communities (Tosini, 2007a, 2007b, 2012; cf. Hoffman, 2006; Law, 2009; Schmid, 2011)—can be attributed to AQI and other Iraqi insurgents because of their goals to compel the US and its allies to withdraw from Iraq (Hashim, 2006, 2009; Pape, 2005; Hafez, 2007; Pape and Feldaman, 2010). This is associated with a pan-Islamic resistance (a form of pan-nationalism), namely a worldwide campaign in which AQI's militants view themselves as a "vanguard" of Muslim fighters (Campanini and Merzan, 2007) in defence of Iraq, as part of the global Muslim community, from "un-Islamic" forces, the so-called "far enemy" (Al-Zawahiri, 2001; Al-Zayyat, 2004; Gerges, 2005; Kepel and Milelli, 2008; Moghadam, 2008; Riedel, 2008; Gunaratna and Oreg, 2010; Hegghammer, 2010; Tosini, 2010a, 2012).

Third, al-Qaeda's transnational campaign is also a revolutionary attempt to overthrow "apostate" regimes in the Muslim world, the so-called "near enemy". Indeed, several Sunni groups affiliated or allied with al-Qaeda network pursue the destruction of "infidel" authorities in Algeria, Saudi Arabia, Indonesia, Pakistan and Somalia, as well as the new regime established in Iraq after Saddam Hussein. A final feature of AQI, shared for example by certain Pakistani organizations, has been sectarian attacks on the Shiites, which can be characterized as a form of vigilantism—meant as the defence of the dominant position of Sunnis within the Muslim world (Nasr, 2006; Cordesman, 2008; Tosini, 2010a; 2012).

Such strategic objectives are nonetheless insufficient to understand the AQI's decision to use terrorist attacks instead of other tactics. Therefore, we should take into account a series of situational mechanisms affecting its actions. These mechanisms are related to the military and political context of the Iraqi battlefield. In this regard, the asymmetry of the armed conflict between insurgents and the incumbents in Iraq is a crucial aspect (for an overview of asymmetric conflicts: Kushner, 2003; Boyns and Ballard, 2004; Münkler, 2005; Kaldor, 2006; Thornton, 2007; Abrahms, 2012). As with other insurgencies, AQI's campaign consisted of confronting unrivalled powers: the US army and its foreign allies; the new Iraqi security forces; and several Shiite militias. Here, AQI and other Sunni insurgents resorted to combat methods that took advantage of the weaknesses of the occupying forces and of the vulnerability of the Shiite Arabs. The unbalance of military power between incumbents and insurgents activated the latter's action formation mechanisms conducive to AQI's adoption of unconventional warfare and terrorism, exemplified by the wave of car bombs that since 2003 have targeted civilians in Iraq, particularly the Shiite population (Nasr, 2006; Cordesman, 2008; Tosini, 2010a, 2012; Beccaro, 2013).

In this sense, AQI should be analysed as a rational agent that searched for tactical alternatives to direct confrontations with its enemy (US Army–Marine Corps, 2007; Adamsky, 2010; Reed, 2008; see also: della Porta, 1995; Crenshaw, 1998). AQI aimed to compensate for its military weakness and to exert pressure on occupiers (the US and other western armies) and their local allies (Shiite Arabs and Kurds) (Hafez, 2007). As with all terrorist tactics (Goodwin, 2006; Schmid, 2011), AQI played on the fear and shock among civilians to influence audiences beyond its immediate targets (i.e., its victims) by: 1) creating a condition of chaos and insecurity among the Iraqi population to delegitimize incumbents and the new Iraqi government; 2) terrorizing civilians to deter Iraqis viewed as effective or potential collaborationists, especially (even if not exclusively) the Shiites, from any compliance with occupiers and the new regime; 3) provoking reprisals by the US army's counterinsurgency and by the Shiite militias against the Sunni community to polarize the sectarian conflict between the Sunni Arabs and the Shiite Arabs (Nasr, 2006; Cordesman, 2008; Munson, 2009; Tosini, 2010a, 2012; Beccaro, 2013).

Additional calculations drive armed groups to employ specific terrorist tactics such as suicide bombings. This depends on peculiar advantages of self-immolations. First of all, "technical" benefits can be identified: 1) greater damage with fewer combatants and casualties; 2) the impossibility, for the enemy, of obtaining information from successful attackers; 3) the ability of disguised bombers to enter guarded locations; 4) their capacity to modify direction to maximize casualties; 5) and the minimal costs of attacker training (Gambetta, 2005; Pedahzur, 2005; Pape, 2005; Ayers, 2008; Moghadam, 2008; Hassan, 2010). When destroying hard targets like military vehicles, such characteristics make a difference. Yet, the question is why AQI resorted to kamikaze attacks against soft targets like the Shiite population. This seems non-rational in that other tactics could also kill civilians without losing militants as bombers (Cordesman, 2008).

However, under certain circumstances suicide attacks are rational because of additional communicative advantages (Hoffman and McCormick, 2004). Referring to the signalling theory (Gambetta, 2005; Gambetta, 2009a, 2009b), we argue that AQI's suicide bombings were signals of a potential of violence and determination. As with other forms of self-immolations, suicide missions have discriminating, communicative aspects. Sacrificing one's life is a costly action and a tangible and hard-to-fake signal, which makes it a convincing proof of commitment and fanaticism. Such features are amplified by using bombers' last wills circulating on the Internet. As with the so-called "martyrdom" videos used by Hezbollah, Hamas and other armed groups (see, for example, Al-Qassam, 2010), AQI exploited representations of attackers as devoted, Muslim combatants to emphasize the signalling qualities of immolations. This clearly aimed at propagandizing the military preparation, the unquestionable willingness to die for a good cause, and the radical opposition to the enemy, that should emerge as characteristics of AQI's all members. In doing so, AQI probably counted on such representations of its militants to psychologically constrain its enemy, especially the Shiites who collaborated with the US and the new Iraqi regime.

AQI's attempts to influence the other two agents of our model played a crucial role in the transformational mechanisms that brought about the Iraqi terrorist campaign. They includes, for example, specific communicative strategies used by AQI to exert pressure on potential collaborators within the Iraqi Sunni Arabs and potential fighters from the local and Muslim community at large. Consider once again the case of suicide bombings. To gain support from its presumed Sunni constituency, al-Qaeda and its affiliates such as AQI have produced countless videos and biographical accounts of suicide attackers exalting their nobility, zeal, and devotion to religion (As-Sahab, 2006; 2009; Hafez, 2007; Moghadam, 2008; Al-Furqan, 2009; Tosini, 2010a, 2012; for other suicide campaigns: Bloom, 2005; Pape, 2005; Pedahzur, 2005). In this sense, bombers are transformed into a communicative medium used to signal solidarity. Their immolation should prove the entire al-Qaeda organization's determination and extreme self-sacrifice in the service of their constituency's interests. At the same time, kamikaze communiqués operate as a recruitment tool for new militants. Suicide missions are represented as martyrdom in the service of Islam, as exemplified by the series of videos *The Convoy of Martyrs*, released by AQI in 2006 (Golbalterroraltert, 2007; for a discussion: Tosini, 2012). Here, more or less explicit calls are made for all Muslims' highest moral obligation: sacrificing oneself in battle for jihad against oppressors of the Muslim community. Emphasis is also put on the suggestive appeal to pride and manhood signalled by the fallen in defence of their "brothers" and, conversely, on the sense of shame and guilt that should be felt by those remaining passive once confronted with abuses and violence against their fellow Muslims (Hafez, 2006).

3. LOCAL SUPPORT FOR AL-QAEDA IN IRAQ

Situational mechanisms affecting potential insurgency collaborators within the Sunni Arab community derived from the political, economic, and cultural conditions related to the post–2003 invasion of Iraq. Forms of discrimination and deprivation drove the community members to assist AQI. The political position and privileges that especially Sunnis enjoyed under Saddam Hussein were challenged, for example, by the two provisions adopted in May 2003 by the US-led Coalition Provisional Authority, headed by Paul Bremer: the "De-Baathification of Iraq", which established the expulsion of former members of the Baath party from institutions of the new political regime; and the "Dissolution of Entities", which ordered and entailed the termination of Saddam Hussein's army and armed forces (Jackson, 2006; ICG, 2006; Munson, 2009). The US gave unprecedented power to the Shiite Arabs and the Kurds in addition to the occupiers' interference in the Sunni tribal interests, increasing the Sunnis' humiliation and the risk of reprisals by their Iraqi rivals (Hashim, 2006, 2009). As stated by the former US ambassador Peter W. Galbraith,

> Bremer's high-handedness created unnecessary enemies. Since Saddam's army had already vanished (as Bremer explained later to justify his decree), there was no need to dissolve it. Sunni officers saw the decree as insulting and arrogant, and there is no doubt that the decree—not just the fact of not recalling the army—added to Sunni bitterness and helped drive men with weapons, and knowledge of how to use them, to the insurgency. The de-Baathification order was both too extreme and interfered with the urgent short-term goal of reconstructing Iraq's bureaucracy. Almost all of Iraq's top civil servants were members of the Baath party and therefore were banned from their old positions. As a result, from mid-May 2003, not only were Iraq's government offices largely empty shells without files and furniture but the experienced managers had all been fired. The decree also affected tens of thousands of others, including teachers and doctors, who joined the Baath party simply to advance their careers (Galbraith, 2008: 55).

In this sense, certain escalations in the use of bombings should be seen as AQI's increased efforts to enhance its support from the Sunni community, as well as its power to influence the Iraqi political arena, by capitalizing on the negative consequences that Sunni Arabs have suffered since the US-led invasion (Hafez, 2007; Tosini, 2010a).

Explanations that consider exclusively benefits offered to the Sunnis thanks to their collaboration with AQI and its allies are nonetheless questionable because of certain shortcomings affecting casual models based on the rational choice theory. As shown by Raymond Boudon (2003, 2005, 2007, 2009a, 2009b; see also: Cherkaoui, 2005), the rational choice theory moves from six postulates: "individualism" (P1)—any social phenomenon emerges from individual decisions; "understanding" (P2)—actions can always be understood; "rationality" (P3)—actions are caused by reasons in the minds of agents; "instrumentalism" (P4)—these reasons stem from consideration by agents of the consequences of their behaviour; "egoism" (P5)—agents focus mainly on the consequences to themselves; "maximization" (P6)—agents choose actions with the most favourable balance of costs and benefits.

A more accurate analysis suggests additional explanations of collaborators' action formation mechanisms. A crucial role was certainly played by emotional and affective factors (as theorized by Weber, 1978 [1922]; see also: Goodwin *et al., 20*01; Goodwin *et al.*, 2004; Barbalet, 2006; Rice, 2009). They include desire for revenge due to emotions such as outrage at the enemy's violence and abuses. No less important factors are norms and values held unconditionally. This orientation corresponds to the concept of "axiological rationality" theorized by Boudon (2003, 2005, 2007, 2009a, 2009b, 2010). Here, agents' decisions are still rational but not reducible to instrumentalism (postulate P4), which means that the explanation of their actions requires exclusively postulates P1, P2, and P3 (for a discussion and application: Demeulenaere, 2003; Cherkaoui, 2005, 2007; Brym and Hamlin, 2009; Tosini, 2009, 2011, 2012).

Indeed, political and religious ideologies facilitated Sunnis' collaboration with AQI. As with other groups such as Hezbollah and the Palestinian organizations, narratives of jihad and martyrdom have been a vital source of legitimacy also for the entire al-Qaeda network and its affiliates around the world (Freamon, 2003; Cook, 2005; Moghadam, 2007; Khosrokhavar, 2009; on martyrdom in Islam: Denaro, 2006; Cook 2007). Iraq, too, has experienced a revival of Islamism since the First Gulf War (1991), which was promptly exploited by AQI and its allies to gain support from the presumed Sunni Arab constituency (Jackson, 2006; Munson, 2009). As stated by Amatia Baram,

> Iraqi Islamists in 2003–2004 have followed in the footsteps of Iranian Islamists on the eve of the Islamic Revolution, who eagerly listened to recordings of Khomeini, then exiled in France. While the Sunnis certainly have increased religious freedoms today, one question remains: why be drawn to the mosque and nowhere else? The answer is simple: under the Ba'th regime all non-Ba'thi social and political institutions and civil-society cells except the mosque were wiped out, and tribes have never had large or deeply institutionalized places of mass assembly that could compete with the mosques. Now that the party's centres are no more, people looking for guidance and identity in this unnerving post-Ba'th environment have discovered it not only in […] books and tapes but also in their mosques. Imams and khatibs (preachers) offer this guidance freely and with great enthusiasm, as the new situation in Iraq has raised their social status and political power by leaps and bond (Baram, 2005: 12).

By the same token, several accounts of collaborators' motivations referred to ideological and religious principles as examples of axiological orientation (Tosini, 2012). In this sense, their reduction to the instrumental versions of rationality would be a crude error.

Turning to collaborators' lines of action viewed as components of transformational mechanisms, we should first focus on interactions between the Sunni Arab community and AQI. Here, collaboration with insurgents took on several empirical forms. Sunnis offered important resources for AQI and its allies such as information, hideouts, and territory for military training. After the 2003 fall of the Baath regime, for instance, the occupiers' interference in Sunni tribes' interests induced tribal leaders to form an alliance with both former Baathists and even extremist jihadists, including AQI (González, 2009; Munson, 2009). This explains why insurgents were able to maintain strongholds inside Sunni-dominated areas, like the Anbar province, from where they could launch attacks on Baghdad and on traditional Shiite holy cities such as Karbala and Najaf (Cordesman, 2008; Hashim, 2006, 2009; Tosini, 2010a, 2012; Beccaro, 2013).

4. TRANSNATIONAL MILITANTS IN THE SERVICE OF THE IRAQI JIHAD

The third condition for organizing the Iraqi terrorist campaign was the availability of fighters. Here, our analysis focuses on foreign jihadists from Muslim countries, particularly on suicide bombers. The first set of situational mechanisms concerns their socio-demographic background. Their radicalization depended to some extent on conditions related to national and ethnic belonging, religious affiliation, education, and marital and economic status (Hafez, 2007; Cordesman, 2008; Moghadam, 2008; Hassan, 2010; Pape and Feldman, 2010). One example is a report on nearly 700 records (aka Sinjar Records) of militants that entered Iraq between August 2006 and August 2007 (CTC, 2007, 2008). Twenty-one countries were mentioned as their origin. Saudis contributed the highest number of fighters (41% of the 576 that listed their nationality). The other most common countries were Libya, Morocco, Syria, Yemen, and Algeria. Two were also from France, one from Britain, and one from Sweden. Libya contributed the most fighters *per capita*. Of the 376 fighters that indicated their "work" in Iraq, 56% were to be suicide bombers and the plurality of them were Saudi (70 fighters or 47% of the total of Saudi fighters). Nonetheless, Libyans (51 or 85% of the total of Libyan fighters) and Moroccans (22 or 91% of the total of Moroccan fighters) that refer to their "work" were much more likely to be enlisted as bombers.

Focusing on Saudis, another report shows the high presence of northerners, which can be attributed to the fact that both geographic proximity to Iraq and loyalties to tribes located on both sides of the border might have conditioned recruitment (Hegghammer, 2007). Personality traits should also be examined as situational factors (Gambetta and Hertog, 2009). Many scholars tend to marginalize their significance, underlining the primary role of political and ideological causes (Horgan, 2005). But this does not explain why only a minority of people exposed to such conditions radicalize and become fighters. For instance, a recent study focusing on incarcerated Palestinian militants reveals distinctive psychological traits affecting would-be suicide attackers. These features constitute factors that make individuals more amenable to recruiting for suicide missions (Merari, 2010).

As for action formation mechanisms, emotional elements, especially anger, outrage, and humiliation certainly played a role. Statements found in martyrdom videos sometimes reflect such affective motivations, resulting in desire for revenge. An example is the 2006 video by the AQI-led Mujahideen Shura Council, titled *Fatima's Fiancé*. It shows Abu Muawiyah Al-Shimali, a Saudi suicide bomber, whose operation is represented as a reaction to an alleged letter sent by a female detainee at Abu Ghraib prison, named Fatima. A script in the video states:

> Like all of us, Abu Muawiyah Al-Shimali read the letter written by the sister in Abu Ghraib prison before she was martyred. He could not calm down, and resolved to avenge her death, and the deaths of all free Muslim women. He could find nothing more precious than his own soul to sacrifice for the sake of Allah, and to redeem the honour of his sisters. He asked Allah to accept him as a martyr, and to marry him to this young woman (Mujahideen Shura Council, 2006).

Specific egoistic interests should not be excluded from the analysis of suicide bombers' motivations. Previous cases of attackers reveal that a suicide mission can also be selected as a way, for example, to overcome circumstances of social marginalization, anomie, a lack of self-esteem due to past wrongdoings (Khosrokhavar, 2005; Pedazhur, 2005), and to search for comradeship (Sageman, 2004; 2008; Wintrobe, 2006). Taking part in a suicide mission, despite the cost of the death, could be perceived as an opportunity to obtain social consideration and reputation among comrades. This is tantamount to an elevation of status, which means that suicide missions are behaviours motivated by a rational choice (Ricolfi, 2006). However, the fact that the majority of suicide bombers within the Iraqi insurgency have remained anonymous or "ghost martyrs" (Ayers, 2008), calls into question the hypothesis of the personal search for social consideration as the fundamental driving motivation for sacrifice. The same can be said of the desire to attain paradise. Rather, both benefits should be analysed as facilitating factors (Elster, 2005).

This suggests the necessity of taking into account other motivations, such as the strength of certain ideological convictions (for a comparable empirical case: Orsini, 2011). Devotion to political and religious values, in particular, played a crucial role for those Muslim militants who volunteered for the Iraqi jihad. Field research and interviews offer some empirical evidence. Hegghammer (2007), for example, emphasizes the devotion of young Saudis to the ideal of Islamic solidarity, which can be traced back to the 1960s. This constitutes a motivational framing (in Snow's and Byrd's parlance [2007]) that can be conceptualized as the pan-Islamic nationalism mentioned above. Such an ideology has been crucial in driving generations of fighters to take part in the anti-Soviet campaign in Afghanistan, and in jihadist campaigns such as those in Bosnia, Chechnya, more recently in Iraq, and once again in Afghanistan (Hegghammer, 2010). Indeed, Islamic solidarity and pan-Islamic nationalism were a recurrent motivational factor referred to in videos of foreign fighters in Iraq. For example, in 2006 the Mujahideen Shura Council released an interview with two alleged militants, one of them declaring:

> By God, we did not leave Saudi Arabia to escape from reality. On the contrary, we left [Saudi Arabia] to stand side-by-side with our brothers in Iraq. And we are full of sadness when we witness our sisters being humiliated. And our brothers in Fallujah are being killed on a daily basis. We came to bring victory for the religion of Allah, and to stand against the infidel occupation of Iraq that spread corruption and tyranny in the land (cited in NEFA, 2006).

A similar devotion has been documented by a series of interviews conducted in Zarqa, Jordan, by journalists Souad Mekhennet and Michael Moss (2007). Abu Ibrahim, a 24-year-old who left Jordan in October 2005 to volunteer for a suicide mission in Iraq with other comrades, states:

> I am happy for them but I cry for myself because I couldn't do it yet. […]. I want to spread the roots of God on this earth and free the land of occupiers. I don't love anything in this world. What I care about is fighting. […]. The sheik [Abu Musab Al-Zarqawi], he was a hero (cited in Mekhennet and Moss, 2007).

According to an Islamist community leader interviewed by Mekhennet and Moss,

> […] most of the young people here in Zarqa are very religious. […]. And when they see the news and what is going on in the Islamic countries, they themselves feel that they have to go to fight jihad. Today, you don't need anyone to tell the young men that they should go to jihad. They themselves want to be martyrs (cited in Mekhennet and Moss, 2007).

Libyans fighting in Iraq have also been driven by pan-Islamic nationalist sentiments and search for martyrdom. In his report from Darnah, journalist Kevin Peraino uncovers complex constellations of factors underlying participation in Iraqi insurgency, such as unemployment, desperation, or personal trauma. However, an additional, crucial influence might be attributed to the political narrative linked to the history of the Libyan anti-colonial resistance against Italians between the 1910s and 1930s (Peraino, 2008). As with insurgent collaborators, normative beliefs are decisive elements accounting for militancy and self-immolations (Elster, 2005, 2009; Barbagli, 2009; an argument clearly inspired by Durkheim, 2006 [1897]). As stated by Mohamed Cherkaoui,

> No consequentialist explanation would thus be able to help us to understand the extra-normative actions of the author of a suicide-bombing, should we so delude ourselves about the naivety of the mythical promises of the next world that is reserved for these blessed ones who are prepared to be so selfless with their bodies. The irrational, fantasy hypothesis that they are drug-induced is hardly any more enlightening about the supreme

> sacrifice of the Ismaeli fraternity of the Assassins, *Hashshashin*, of Hasan Assabah, the Elder of Mount Alamut, that some would exhume nowadays in order to elucidate terrorist bombings. On the other hand the theory of axiological rationality that assumes the actor acts as a result of beliefs that are deeply felt to be legitimate and rooted in a communitarian context [referring to Boudon], and the invaluable Durkheimian analyses of altruistic suicide, may prove to be of great help in unraveling this type of action, however paradoxical it might appear (Cherkaoui, 2007: 194–195).

What mainly emerges from a plurality of fighters' statements is a form of axiological rationality, combined with other personal aspirations to social consideration, resulting into an absolute commitment to values such as pan-Islamic nationalism and martyrdom (Brym and Hamlin, 2009; Tosini, 2009, 2010b, 2012). As seen, these values have been frequently exploited by elite members of Al-Qaeda and used as crucial components of their propaganda machine to recruit fighters (Mussawi, 2010).

5. CONCLUSIONS

The paper has examined cultural, political, and motivational factors responsible for al-Qaeda's terrorist violence in Iraq between 2003 and the end of 2007. The analysis has been inspired by contributions from the field of the analytical sociology, including Mohamed Cherkaoui's work on generative mechanisms and Islamic fundamentalism. We have identified three kinds of agents involved in the Iraqi terrorist campaign: al-Qaeda in Iraq and its allies; insurgency collaborators within the Iraqi Sunni Arabs; and local and foreign fighters recruited by al-Qaeda, particularly suicide bombers from the Middle East.

In addition, three sets of generative mechanisms has been analysed: situational mechanisms relating to agents' constraints and opportunities associated with the Iraqi political, religious, economic, and military context; action formation mechanisms focusing on agents' decision-making; and transformational mechanisms concerning interactions between agents. As for al-Qaeda organization and its allies, this chapter has shown how they exploited political opportunities following the overthrown of Saddam Hussein; they also employed terrorist tactics such as suicide bombings against civilians to deal with the asymmetry of military power that characterized the Iraqi battlefield. The Iraqi insurgents could also gain support from the Sunni Arabs marginalized by the new Shiite Arabs-dominated regime and were able to recruit local and foreign fighters by playing on narratives of martyrdom and jihad. For both collaborators and fighters, this chapter has highlighted the importance of adopting a more general paradigm of rationality that might be able to overcome certain limitations affecting explanations based on the rational choice theory.

NOTE

1. This chapter is partly based on Tosini (2011).

REFERENCES

Abrahms, M. (2012) "The political effectiveness of terrorism revisited", *Comparative Political Studies,* 45(3): 366–393.

Adamsky, D. (2010) "Jihadi operational art: The coming wave of jihadi strategic studies", *Studies in Conflict and Terrorism*, 33(1): 1–19.

Al-Furqan (2009) *Knights of Martyrdom (1–5).* Retrieved from As-Sahab website. Available at: http://as-sahab.blog.com/2009/01/06/al-furqan-presentsknights-of-martyrdom-all–1–5 (Accessed on: 5 August 2010).

Al-Qassam (2010) *Qassam Martyrs—Ezzedeen Al-Qassam Brigades*. Retrieved from Al-Qassam website. Available at: http://www.qassam.ps/martyrs.html (Accessed on: 6 August 2010).

Al-Zawahiri, A. (2001) "Knights under the Prophet's banner", in L. Mansfield (ed.) *His Own Words: The Writings of Dr. Ayman Al-Zawahiri*. TLG Publications, pp. 19–225.

Al-Zayyat, M. (2004) *The Road to Al-Qaeda: The Story of Bin Laden's Right-Hand Man*. London: Pluto Press.

As-Sahab (2006) *Last Will of the Knights of the Blessed Expedition*. Retrieved from As-Sahab website. Available at: http://as-sahab.blog.com/2006/08/07/as-sahab-presentslast-will-of-the-knights-of-the-blessed-expedition-the-london-raid-with-english-subtitles (Accessed on: 7 August 2010).

Ayers, N. (2008) "Ghost martyrs in Iraq: An assessment of the applicability of rationalist models to explain suicide attacks in Iraq", *Studies in Conflict and Terrorism,* 31(9): 856–82.

Baram, A. (2005) "Who are the insurgents? Sunni Arab rebels in Iraq", *United States Institute of Peace*, Report. Available at: http://www.usip.org/pubs/specialreports/sr134.pdf (Accessed on: 20 January 20 2008).

Barbagli, M. (2009) *Congedarsi dal mondo: il suicidio in Occidente e in Oriente*. Bologna: il Mulino.

Barbalet, J. (2006) "Emotions in politics: From the ballot to suicide terrorism", in S. Clarke *et al.* (eds), *Emotion, Politics and Society*. London: Palgrave, pp. 31–55.

Barbera, F. (2004) *Meccanismi Sociali*. Bologna: il Mulino.

Beccaro, A. (2013) *La guerra in Iraq*. Bologna: il Mulino.

Bloom, M. (2005) *Dying to Kill*. New York: Columbia University Press.

Boudon, R. (2003) "Beyond rational choice theory", *Annual Review of Sociology*, 29: 1–21.

——— (2005) "Teoria della scelta razionale o individualismo metodologico: sono la stessa cosa?", in M. Borlandi and Sciolla (eds), *La spiegazione sociologica*. Bologna: il Mulino, pp. 17–32.

——— (2007) *Essais sur la théorie générale de la rationalité*. Paris: Presses Universitaires de France.

——— (2009a) "Rational Choice Theory", in B. S. Turner (ed.), *The New Blackwell Companion to Social Theory*. Oxford: Blackwell Publishing, pp. 179–195.

——— (2009b) *La rationalité*. Paris: Presses Universitaires de France.

——— (2010) *La sociologie come science*. Paris: La Découvert.

——— (2012) "Analytical sociology and the explanation of beliefs", *Revue Européenne des Sciences Sociales*, 50(2): 7–34.

Boyns, D. and J. D. Ballard (2004), "Developing a sociological theory for the empirical understanding of terrorism", *American Sociologist,* 35(2): 5–26.

Brym, R. J. and C. Hamlin (2009) "Suicide bombers: Beyond cultural dopes and rational fools", in M. Cherkaoui and P. Hamilton (eds.) *Raymond Boudon: A Life in Sociology*. Oxford: Bardwell Press, pp. 83–96.

Campanini, M. and K. Merzan (2007) *Arcipelago Islam*. Rome–Bari: Laterza.

Cherkaoui, M. (2005) *Invisible Codes: Essays on Generative Mechanisms*. Oxford: Bardwell Press.

——— (2007) *Good Intentions: Max Weber and the Paradox of Unintended Consequences*. Oxford: Bardwell Press.

Coleman, J. (1990) *Foundations of Social Theory*. Cambridge, MA: Harvard University Press.

Cook, D. (2005) *Understanding Jihad*. Berkeley, CA: University of California Press.

——— (2007) *Martyrdom in Islam*. Cambridge: Cambridge University Press.

Cordesman, A. H. (2008) *Iraq's Insurgency and the Road to Civil Conflict*. Westport, CO: Praeger.

Crenshaw, M. (1998) "The logic of terrorism: Terrorist behavior as a product of strategic choice", in W. Reich (ed.), *Origins of Terrorism*. Washington, DC: Woodrow Wilson Center Press, pp. 7–24.

CTC (2007) *Al-Qaeda's Foreign Fighters in Iraq*. West Point (NY): Combating Terrorism Center. Available at: http://ctc.usma.edu/harmony/pdf/CTCForeignFighter.19.Dec07.pdf (Accessed on: 15 January 2008).

——— (2008) *Bombers, Bank Accounts, and Bleedout: Al-Qa'ida's Road in and out of Iraq*. West Point (NY): Combating Terrorism Center. Available at: http://ctc.usma.edu/harmony/pdf/Sinjar_2_July_23.pdf (Accessed on: 15 August 2008).

Della Porta, D. (1995) *Social Movements, Political Violence and the State: A Comparative Analysis of Italy and Germany*. Cambridge (UK): Cambridge University Press.

Demeulenaere, P. (2003) *Les normes sociales. Entre accords et désaccords*. Paris: Presses Universitaires de France.

——— (2011) (ed.) *Analytical Sociology and Social Mechanisms*. Cambridge: Cambridge University Press.

——— (2012), "De l'individualisme méthodologique à la sociologie analytique", in P. Demeulenaere and G. Bronner (eds), *La théorie sociale contemporaine*. Paris: Presses Universitaires de France, pp. 19–32.

Denaro, R. (2006) *Dal martire allo Šahīd. Fonti, Problemi e confronti per una martirografia islamica*. Rome: Edizioni di Storia e Letteratura.

Durkheim, E. (2006 [1897]) *Suicide*. New York: The Free Press.

Elster, J. (2005), "Motivations and beliefs in suicide missions", in D. Gambetta (ed.), *Making Sense of Suicide Missions*. Oxford: Oxford University Press, pp. 233–258.

——— (2007) *Explaining Social Behavior*. Cambridge: Cambridge University Press.

——— (2009) *Le désintéressment*. Paris: Édition de Seuil.

Freamon, B. K. (2003) "Martyrdom. Suicide, and the Islamic law of war", *Fordham International Law Journal*, 27(1): 299–369.

Galbraith, P. W. (2008) *Unintended Consequences: How War in Iraq Strengthened America's Enemies*. New York: Simon & Schuster.

Gambetta, D. (2005), "Can we make sense of suicide missions?", in D. Gambetta (ed.), *Making Sense of Suicide Missions*, Oxford: Oxford University Press: 259–299.

——— (2009a) "Signaling", in P. Hedström and P. Bearman (eds), *The Oxford Handbook of Analytical Sociology*. Oxford: Oxford University Press, pp. 168–194.

——— (2009b) *Codes of the Underworld: How Criminals Communicate*. Princeton, NJ: Princeton University Press.

Gambetta, D. and S. Hertog (2009) "Way are there so many engineers among Islamic radicals?", *European Journal of Sociology*, 50(2): 201–230.

Gerges, F. A. (2005) *The Far Enemy: Why Jihad Went Global*. Cambridge: Cambridge University Press.

Golbalterroraltert (2007) "Al-Qaeda's Mujahideen Shura Council—Convoy of Martyrs 2006", *Globalterroralert*, Available at: http://www.globalterroralert.com/video/0207/martyrconvoy0207.wmv (Accessed on: 15 February 2008).

González, R. J. (2009) "Going 'tribal': Notes on pacification in the 21st century", *Anthropology Today*, 25(2): 15–19.

Goodwin, J. (2006), "A theory of the categorical terrorism", *Social Forces*, 84(4): 2027–2046.

Goodwin, J. *et al.* (eds.) (2001) *Passionate Politics. Emotions and Social Movements*. Chicago: The University of Chicago Press.

Goodwin, J. *et al.* (2004) "Emotional dimensions of social movements", in D. A. Snow (eds), *The Blackwell Companion to Social Movements*. Oxford: Blackwell Publishing.

Gunaratna, R. and Oreg, A. (2010) "Al-Qaeda's organizational structure and its evolution", *Studies in Conflict and Terrorism*, 33(12): 1043–1078.

Hafez, M. (2006) "Martyrdom mythology in Iraq: How jihadists frame suicide terrorism in videos and biographies", *Terrorism and Political Violence*, 19(1):95–115.

Hafez, M. (2007) *Suicide Bombers in Iraq*. Washington, DC: US Institute of Peace Press.

Hashim, A. S. (2006) *Insurgency and Counter-Insurgency in Iraq*. Ithaca, NY: Cornell University Press.

——— (2009) *Iraq's Sunni Insurgency*. London: Routledge.

Hassan, R. (2010) *Life as a Weapon*. London: Routledge.

Hedström, P. (2005) *Dissecting the Social: On the Principles of Analytical Sociology*, Cambridge: Cambridge University Press.

Hedström, P and Bearman, P. (eds) (2009) *The Oxford Handbook of Analytical Sociology*. Oxford: Oxford University Press.

Hedström, P and Swedberg, R. (eds) (1998) *Social Mechanisms*. Cambridge: Cambridge University Press.

Hedström, P. and P. Yliloski (2010) "Causal mechanisms in the social sciences", *Annual Review of Sociology*, 36: 49–67.

Hegghammer, T. (2007) "Saudi militants in Iraq", *Norwegian Defence Research Establishment*. Available at: http://rapporter.ffi.no/rapporter/2006/03875.pdf (Accessed on: 15 February 2008).

——— (2010) *Jihad in Saudi Arabia*. Cambridge: Cambridge University Press.

Hoffman, B. (2006) *Inside Terrorism*. New York: Columbia University Press.

Hoffman, B. and G. H. McCormick (2004) "Terrorism, signaling, and suicide attack", *Studies in Conflict and Terrorism*, 27(4): 243–281.

Horgan, J. (2005) *Psychology of Terrorism*. London: Routledge.

ICG (2006) "The next Iraq war? Sectarianism and civil conflict", *International Crisis Group*, Middle East Report No. 52. Available at: http://www.crisisgroup.org/home/index.cfm?id=3980&l=1 (Accessed on: 8 February 2008).

Jackson, J. W., (2006) *Military Intervention in Identity Group Conflicts: A Social Movement Theory Perspective on the Sunni Insurgency in Iraq*. Monterey, CA: Naval Postgraduate School.

Kaldor, M. (2006) *New and Old Wars*. Cambridge: Polity Press.

Kepel, G. and J.-P. Milelli (eds) (2008) *Al-Qaeda in Its Own Words*. Cambridge, MA: Harvard University Press.

Khosrokhavar, F. (2005) *Suicide Bombers*. London: Pluto Press.

——— (2009) *Inside Jihadism*. London: Paradigm Publishers.

Kushner, H. W. (2003) "Asymmetrical warfare", in H. W. Kushner, *Encyclopedia of Terrorism*. London: Sage, pp. 54–65.

Law, Randall D. (2009) *Terrorism: A History*. Cambridge: Polity Press.

Manzo, G. (2009) *La spirale des inégalités. Choix scolaires en France et en Italie au XX siècle*. Paris: PUPS.

——— (2010) "Analytical sociology and its critics", *European Journal of Sociology*, 51(1): 129–170.

——— (2012) "Reason-based explanations and analytical sociology", *Revue Européenne des Sciences Sociales*, 50(2): 35–65.

Mekhennet, S. and M. Moss (2007) "In jihadist haven, a goal: To kill and die in Iraq". *New York Times*, 5 April.

Merari, A. (2010) *Driven to Death: Psychological and Social Aspects of Suicide Terrorism*. Oxford: Oxford University Press.

Moghadam, A. (2007), "Mayhem, myths, and martyrdom: The Shi'a conception of jihad", *Terrorism and Political Violence*, 19(1): 125–143.

——— (2008) *The Globalization of Martyrdom*. Baltimore, MD: Johns Hopkins University Press.

Mujahideen Shura Council (2006) "Footage of Saudi terrorist Abu Mu'awiya Al-Shimali", *Middle East Media Research Institute*, February 13. Available at: http://www.memritv.org/clip/en/1037.htm (Accessed on 20 February 2008).

Münkler, H. (2005) *The New Wars*. Cambridge: Polity.

Munson, P. J. (2009) *Iraq in Transition*. Washington, DC: Potomac Books.

Mussawi, M. A. (2010) *Cheering for Osama: How Jihadists use Internet Discussion Forums*. London: Quilliam Foundation. Available at: http://www.quilliamfoundation.org/index.php/component/content/article/700 (Accessed on: 19 October 2010).

Nasr, V. (2006) *The Shia Revival*. London: W.W. Norton and Co.

NEFA (2006) "The Role of foreign fighters in the Iraqi jihad", *NEFA Foundation*, May. Available at: http://www1.nefafoundation.org/multimedia-original.html (Accessed on: 5 March 2008).

Orsini, A. (2011) *Anatomy of the Red Brigades*. New York: Cornell University Press.

Pape, R. A. (2005) *Dying to Win*. New York: Random House.

Pape. R. A. and J. K. Feldman (2010) *Cutting the Fuse: The Explosion of Global Suicide Terrorism and How to Stop It*. Chicago: The University of Chicago Press.

Pedahzur, A. (2005) *Suicide Terrorism*. Cambridge: Polity Press.

Peraino, K. (2008), "Destination martyrdom", *Newsweek*, 28 April (http://www.newsweek.com/id/132938).

Reed, D. J. (2008) "Beyond the War on Terror: Into the fifth generation war and conflict", *Studies in Conflict and Terrorism*, 31(8): 664–722.

Rice, S. K. (2009) "Emotions and terrorism research", *Journal of Criminal Justice*, 37(3): 248–255.

Ricolfi, L. (2005) "Palestinians, 1981–2003", in D. Gambetta (ed.), *Making Sense of Suicide Missions*. Oxford: Oxford University Press, pp. 77–130.

Riedel, B. (2008) *The Search for Al-Qaeda*. Washington DC: Brookings Institution Press.

Sageman, M. (2004) *Understanding Terror Networks*. Philadelphia: University of Pennsylvania Press.

——— (2008) *Leaderless Jihad*. Philadelphia: University of Pennsylvania Press.

Schmid, A. P. (2011), *The Routledge Handbook of Terrorism Research*. London: Routledge.

Snow, D. and S. G. Byrd (2007), "Ideology, Framing Processes, and Islamic Terrorist Movements", *Mobilization*, 12(1): 119–136.

Thornton, R. (2007) *Asymmetric Warfare*. Cambridge: Polity Press.

Tosini, D. (2007a) *Terrorismo e antiterrorismo nel XXI secolo*. Rome–Bari: Laterza.

——— (2007b) "Sociology of terrorism and counterterrorism", *Sociology Compass*, 1(2): 664–681.

——— (2010a) "Al-Qaeda's strategic gamble: The sociology of suicide bombings in Iraq". *Canadian Journal of Sociology*, 35(2): 271–308.

——— (2010b) "Calculated, passionate, pious extremism: beyond a rational choice theory of suicide terrorism", *Asian Journal of Social Science,* 38(3): 392–413.

——— (2011) "Agents and mechanisms of terrorist campaigns: A contribution to a general theory of rationality", *Revue Européenne des Sciences Sociales*, 49(2): 43–70.

——— (2012) *Martiri che uccidono: il terrorismo suicida nelle nuove guerre*. Bologna: il Mulino.

US Army-Marine Corps (2007) *Counterinsurgency Field Manual*. Chicago and London: The University of Chicago Press.

Weber, M. (1978 [1922]) *Economy and Society.* Berkeley, CA: University of California Press.

Wintrobe, R. (2006) *Rational Extremism*. Cambridge: Cambridge University Press.

35

IRONY AND PARADOX IN SOCIOLOGICAL EXPLANATIONS

Mohamed Cherkaoui on Revolutions and Good Intentions

Bryan S. Turner
The Graduate Center, The City University of New York

INTRODUCTION: IRONY AND UNINTENDED CONSEQUENCES IN CLASSICAL SOCIOLOGY

Sociology, and especially classical sociology, frequently used the rhetorical devices of irony and paradox as important features of its causal narratives. While this genre was often used for its effect on the reader, irony and paradox were actually important as devices for understanding causal mechanisms of social change. They also were used to grasp the unexpected and unanticipated consequences of , typically voluntary, actions. The principal example is probably in the work of Max Weber on the unintended consequences of action, or in terms of the classical world the oscillation between fate and virtue. For example in *The Protestant Ethic and the Spirit of Capitalism,* he showed us that the unintended consequences of Protestant piety was to create a disciplined spiritual life style that nevertheless had an "elective affinity" with the spirit of capitalism. The Protestant ascetics in search of salvation contributed to the rise of secular modernity. In a previous study of Weber, I suggested that we could think of this type of sociological reasoning as a contribution to the sociology of fate. By this notion, I wanted to draw attention to a pessimistic streak in Weber's sociology of voluntary actions, namely that the outcomes of human action often undermine the intentionality of the actor in a negative direction. More precisely, the outcomes of social action are negative and almost never positive. The long-term consequences of Protestantism included alienation and meaninglessness in the rationalization of life styles (Turner, 1981). These features of Weber's sociology as a form of narrative were deftly identified by Frederic Jameson (1973) in his famous article on "The vanishing mediator: narrative structure in Max Weber".

Why have I chosen this theme in this collection celebrating the sociology of Mohamed Cherkaoui? The main reason is that Professor Cherkaoui is also deeply aware of the role of irony and paradox in sociological explanations. These issues were brilliantly explored in his *Invisible Code* (2005) and in *Good Intentions* (2007a). In this chapter I want to consider how his understanding of unintended consequences was employed in his comprehensive study of modern day Morocco (Cherkaoui, 2007b). I describe his sociological insight into growing social unrest in Morocco following the reforms of King Mohammed VI and apply his perspective on unintended consequences to the Arab Spring of 2012. However before looking at Professor Cherkaoui's research, let us consider further examples of irony and paradox in under to grasp their various dimensions and their value in sociological explanations.

Karl Marx provided many critical observations in both his journalism and scientific writing about the predatory character of western capitalism, particularly the impact of British imperialism as an exploitative system extracting resources cheaply and exporting manufactured goods at inflated prices. However a closer examination of his account in terms of the famous Asiatic mode of production offers a more subtle insight into his argument. This interpretation of Asia was undertaken by Marx and Engels writing in the 1850s for the *New York Daily Tribune* in which they explained the lack of Asian development in terms of natural conditions (such as aridity), the self-sufficiency of village life, and despotic political rulership (Bailey and Llobera, 1981). The British in introducing private property, the railway system, daily newspapers, educational reform and so on had modernized much of Indian society, thereby destroying the roots of the Asiatic mode of production which had condemned India to stagnation and despotic rule. The irony of Marx's writings on colonialism is that they had the unintended effect of implicitly and grudgingly recognizing British intervention as the only possible route into modernity. British control of India and Egypt had manifestly painful aspects, but in terms of the sweep of history it galvanized these societies thereby bringing about rapid social change. Whether we agree with Marx on India is not important; it merely offers a clear illustration of the irony of unintended consequences.

Another example from political economy is the famous *Essay on Population* by Thomas Malthus in 1803. The essay rapidly became a mainstay of political economy, albeit heavily criticized by Marx, who found it analytically difficult to incorporate "population" into his explanatory framework that gave priority to "social class". Simplifying Malthus's argument, his demography offered human societies a stark choice. The first option is to enjoy unlimited sexual pleasures thereby spawning large numbers of children, and running the risk in the long run of famine, hardship and social unrest. The second option is to delay marriage, restrain sexual desire and curb the number of children per household, and thereby increase the prospects of relative security. The intended action (sexual pleasure) has unintended negative consequences including famine and the prospect of war. His work clearly had morally severe and politically conservative assumptions. Malthus's work was a great deal more sophisticated than this basic exegesis (sexual austerity or famine) implies, but he had to make certain simplifying assumptions about the availability of arable land, a stable labour force and the low level of technological available to farms. His work came to have a significant impact on economists such as David Ricardo who built it into his model of profits, wages and rents. Ricardo was yet another ironist, who saw that population growth as a cause of wealth required more land but this could only take place in the long run on less fertile soil resulting in the "law of diminishing returns". Similarly one ironic implication of Malthus's theory was that any increase in the wages of the urban working class would be counter-productive, since it would only increase their fertility rate leading inevitably to inflation, shortages and famine. Subsequently Malthus has been much criticized because overseas colonial expansion, increased agricultural production, contraception and improvements in transport systems were among the many factors that appear to have undermined the stark choices in his demographic theory.

We can consider one final example from Alexis de Tocqueville's *Democracy in America* which I have selected primarily because it was important in Cherkaoui's explanation of certain otherwise surprising developments in Morocco. Tocqueville is famous for his account of why the American revolutionary struggle to create a new type of society free from the tyranny of European monarchies was a success, whereas the revolution in France had ended in terror. His answer contained many components such as his understanding of the important role of churches in fostering the dynamic growth of civil society, but his analysis also pointed to certain dangers in the American experiment such as the levelling consequences of the emphasis on equality and the dangers it posed for freedom of conscience. In fact Tocqueville's fears for an emerging mass society of individual opinion had a profound impact on J.S. Mill , the great philosopher of liberty. Having digested the message of Tocqueville's more sober perspective in volume two of *Democracy in America,* Mill (1991) *On Liberty* in 1859 feared that any rapid expansion of the franchise would threaten independence of thought resulting in the stultifying effects of mass opinion. The quest for radical equality could have the unintended consequence of the totalitarianism of mass society. For Tocqueville, the great irony of the French Revolution was that its irreligion (or anti-clericalism) had created new religions—the universal religion of Mankind, which became the centre-piece of Auguste Comte's political philosophy. Both Tocqueville and Edmund Burke saw this outcome as the inevitable consequence of excessive abstract theorizing (Wolin, 2001).

However it was in *The Old Regime and the French Revolution* that we, as Cherkaoui recognized, can discover the most interesting and pertinent example of unintended consequences. Cherkaoui (2007b: 159) cites the following passage from Book 3 chapter IV concerning when revolutions are most likely to occur. Tocqueville (1955: 176–7) argued that revolutions take place "when a people which has put up with an oppressive rule over a long period without protest suddenly finds the government relaxing its pressure, it takes up arms against it … and experience teaches us that, generally speaking, the most perilous moment for a bad government is one when it seeks to mend its ways. Only consummate statecraft can enable a King to save his throne when after a long spell of oppressive rule he sets to improving the lot of his subjects". During the last twenty years of the Old Regime, France in relative terms experienced a period of rising prosperity and demographic growth, and it was in this period that there was a flurry of literature on the perfectibility of mankind. Tocqueville noted that two decades before 1780, there was no sense of hope; twenty years after that date, there was no anxiety about the future. This period of prosperity in fact laid the seeds of subsequent revolutionary change in for example the doctrine of equal rights. This change in public opinion involved rising expectations about what was possible and subsequently Tocqueville's theory of revolutionary activity came to be known as "the revolution of rising expectations". Louis XVI's royal policies of social reform created these heightened expectations of future improvements that were inevitably frustrated when the reforms ultimately failed. The unintended consequences of these reforms were to unsettle existing norms (or *moeurs*) which made co-operation between social classes very difficult to attain. Cheryl Welch (2001: 147) notes "the underlying irony that the only king who attempted seriously to remedy the inequities of the Old Regime mounted the scaffold".

There is an important difference between Professor Cherkaoui's view of the negative consequences of good intentions and the legacy of Bernard de Mandeville (1989) the author of *The Fable of Bees or Private Vices, Publick Benefits* which first appeared as a poem in 1705 and later as a book in 1714. It made popular the idea of "private vices" creating the unintended consequences of "public virtues". He tried to show that the private and greedy pursuit of wealth and power—our private vices—nevertheless had the good outcome of creating wealth and employment in the economy as a whole. It is through these individual endeavours that aggregate demand results in economic growth. The book caused a scandal because it was seen to be a direct attack on Christian values which did not at the time openly support the quest for personal satisfaction through the accumulation of luxuries. Mandeville's work suggested that saving through Christian asceticism was not good for the economy. While Mandeville wrote in a sarcastic style, his vision had a serious underpinning that gave rise to the idea of an "invisible hand" that drives the market. Mandeville's notion—bad intentions have good outcomes- is therefore the opposite of the idea that good intentions such as political reform can often have bad and unanticipated outcomes.

FROM THE ARAB SPRING TO THE WINTER OF OUR DISCONTENT

In the context of modern North Africa, Tocqueville's observations on rising expectations allows Professor Cherkaoui to explain why civil conflict, including criticism of the monarchy, increased after the reforms of Mohammed V began to take effect. Towards the end of this chapter, I want to apply Cherkaoui's insights more broadly into the various manifestations of the Arab Spring. He recognized that the stability of the Maghreb would require a stable and successful Moroccan society that could in turn offset the dangers of an expansive Algeria. He feared in particular the expansion of Algeria's military capabilities and the growing relationship between Algeria's military needs and the expansive foreign policies of Iran and China. Algeria's military capacity was based on oil revenues which surged from 1967 onwards, thereby allowing the country to engage in a massive re-armament programme with the assistance of the Soviet Union. The border dispute between Morocco and Algeria became an important issue in the 1960s when King Mohammed V agreed to avoid a discussion of the border dispute with France in order to prevent entanglement in the Algerian war of independence. The borders between Algeria and Morocco were a product of French colonialism after Morocco had become a French Protectorate in 1912. Algeria had occupied disputed territories during the "sand wars" in 1963 when the socialist Arab states had supported Algeria against Morocco. Under President Boumediene, Algeria had pursued a policy of economic centralization and sought to establish a regional dominance.

Starting in late December 2010, Algeria experienced some degree of social unrest which were inspired by similar protests in the region and in February 2011 the government lifted its nineteen year long state of emergency. Some reforms took place including legislation relating to the creation of political parties, the reform of the electoral code and the representation of women in elected bodies. Despite these reforms, Professor Cherkaoui describes Algeria as basically an authoritarian state in which the military controls the elected politicians. Critics have not been impressed by the leadership's response to civil protests. The military leadership have been unsuccessful in boosting the economy despite plentiful oil revenues. The leadership has mismanaged oil revenues, seeking instead to satisfy vested interests. While Algeria survived the protests, with a high unemployment rate among young men, the government remains nervous in face of civil unrest.

In order to explain the differences between Morocco and Algeria, Cherkaoui appealed to a theory in international relations in which countries are faced by two credible strategies: either trade or war. In this respect he followed A.O. Hirschman (1977) *The Passion and the Interests*. The argument, which is now familiar, is that societies that trade together don't go to war against each other, and the theory suggests that the Marxist theory of capitalist imperialism is wrong. Capitalism is not an inherently aggressive and bellicose system, but rather one that promotes the quest for profit rather than political domination. Because for Cherkaoui Algeria is directed by a secretive military elite, it is clear that Algeria does not have peaceful trading interests, but rather is driven by the logic of a self-interested and self-recruiting elite. With a brief period when democratic developments might have taken place between 1989 and 1991, the military leadership has determined how political succession would take place. Boumediene died in 1978 and was followed by a series of military figures—Chadli Bendjedid. In 1999 Abdelaziz Bouteflika came to power in the same year that the Moroccan King Hassan died. Why has the Algeria military leadership been successful in retaining power? For Cherkaoui (2007b: 24), whereas many authoritarian states have elites that circulate, the military leadership represents in fact a caste in which the military represent a power pyramid which is defended by a large security system numbering some 550,000 persons. It is interesting therefore to keep in mind that, while many North African and Middle Eastern societies experienced the Arab Spring, Algeria did not witness a similar development. We need to note the fact that neither did Morocco.

In his famous *Islam Observed*, Clifford Geertz (1968: 75) observed that the Moroccan monarchy was the "key institution in the Moroccan political system" but it was also the principal institution in its religious system. He made the ironic observation that during the reign of Mohammed V "a Muslim finally got to be the Sultan" (Geertz,1968: 81). By carefully separating the sacred and the profane in his personal life, he was able to be both an *homme fetiche* and a skilful politician.

King Hassan II became king of Morocco in 1961 and the kingdom's first elections took place in 1963, but a state of emergency was declared in 1965 and parliament was suspended. In 1971 there was a failed attempt to remove the King from office and declare a republic. During his reign there was a period of serious human rights abuse. He died in 1999 to be succeeded by his son, who is regarded as a cautious reforming monarch. Shortly after coming to the throne on 23 July 1999, Mohammed VI spoke to the Moroccan people via television, promising to address problems of poverty and corruption by creating jobs and improving the country's human rights record. In February 2004 he enacted a new family code granting women greater freedoms. He sought to create greater transparency for example by creating the Instance Equite et Reconciliation (IER) to research the rights abuses that had occurred under Hassan II. In a speech on 9 March 2011 he also sought to strengthen parliament by giving it powers to better discharge its functions. At the same time he wanted to enhance the independence of the judiciary from the King. On 1 July 2011 voters approved of an array of reforms including recognition of the Berber language, acceptance of the idea that the King is not a sacred person, and promulgation of women's civic and social equality with men.

Cherkaoui notes that there are important indicators of modernization in Morocco such as improvements in educational standards, enhanced powers for women, lower rates of fertility, urbanization and democratization of the political sphere. As this liberalization has been taking place, there has been growing unrest among young people. In recent years there are regular protests on Tuesdays and Wednesdays when parliament is in session. However there have been more violent events. In 2003, 40 people were killed in the Casablanca bombings by suicide bombers who targeted various locations including a Spanish restaurant and a Jewish community centre. In 2007 further bombings killed civilians in Casablanca leading to the arrest and imprisonment of 40 terrorists. In April 2011, some 17 people, mainly foreigners, were killed in a bomb attack on a Marrakech café. In 2011–2012 thousands of people rallied in Rabat and various other cities demanding political reforms and a revised constitution that would curb the powers of the king. In July 2011 the King achieved an important victory in a referendum on a reformed constitution that he had proposed to placate protests that imitated the Arab Spring protests that were sweeping across North Africa and the Middle East. The King is now obliged to appoint the prime minister of the country that wins the most seats in the parliament. Perhaps more significantly, the king is no longer regarded within the constitution as sacred; however the integrity of his person is inviolable. Protests within Morocco have not so far threatened the monarchy.

The wave of protests and revolts across North Africa and the Middle East occurring in the first half of 2011 has generated widespread interest among academics and journalists (Goldstone, 2011). From the origin of these disturbances in Tunisia, the centre piece of the uprisings was nevertheless the Revolution in Egypt on 25 January 2012 resulting in the unexpectedly sudden resignation of President Hosni Mubarak, the popular election of Mohammed Morsi, and the creation of a panel to develop a new constitution. A more violent popular uprising in Libya resulted in the killing of Colonel Gaddafi and the arrest of his son. In the Yemen, the unstable relationship between the tribal North and the modernized South began to unravel resulting in significant political instability. Protests across the Gulf States did not result in any dramatic political changes and the uprisings in Syria have so far not brought about a change of regime. Despite the general enthusiasm for a peaceful transition to democracy in the spring of 2012, by the autumn of that year there was more realism, if not cynicism, about the prospects of lasting social and political change in the region. I refer here to the negative unanticipated consequences of the Arab Spring and associated popular uprisings as “the winter of our discontent”.

The mounting discontent is therefore compatible with the theory that Professor Cherkaoui derives from Tocqueville that revolutionary activity is more likely with dissatisfaction of unmet rising expectations. In his study of Tocqueville, Raymond Boudon (2006: 61–2) praised Tocqueville for the insight that the French Revolution emerged out of a period of relative prosperity rather than deep depression. Improvements in the standard of living can result in dissatisfaction especially when the distribution of increasing affluence is unequally spread. Boudon connects the theory with the work of Mancur Olson (1963) who also showed the connection between economic growth and social and political instability. The specific issue in Egypt and Tunisia appears to be the presence of a large cohort of young men, many of whom have secondary or tertiary education, who cannot find meaningful employment and hence their expectations of improvement are sadly deflated by failing economies. The dissatisfaction is intensified in Libya and Egypt, where after the political transformation, the economic situation is worse.

This discussion brings into view the refinements which Cherkaoui has made to the standard interpretation of Tocqueville in his *Invisible Codes*. In that work, Cherkaoui is inclined to think that the model of rising unsatisfied expectations is a version of Émile Durkheim's theory of anomie or normative instability in periods of rapid economic growth. We can summarize here what Cherkaoui (2005: 18) describes as "The double inflationary spiral of expectation and frustration: a model of pure anomie":

When economic growth and the continuous and objective improvement of political conditions are maintained at a high rate for a long period, the expectations of individuals tend to increase. If the growth rate of expectations is greater than that of real conditions, an inflationary spiral in expectations will be seen.

Following on the autocratic reign of the traditional sultanate, Mohammed VI unleashed a period of rising expectations which were not easily satisfied. Nevertheless Morocco may be spared the turmoil that has engulfed other countries in the region, where authoritarian or tyrannical leaders were removed by revolutionary uprisings.

THE WINTER OF OUR DISCONTENT

In the West, there is widespread concern about what might come after the overthrow of the regimes in Yemen, Tunisia, Libya and Egypt, and even deeper anxiety about what, if anything, may come after the civil violence in Syria. Democratic elections in Tunisia and Egypt have resulted in governments and legal codes that are inspired more by conservative Islam than by secular versions of democracy. One indicator of this more conservative turn is the trend towards an erosion of the rights of women by new laws or the revival of old ones. I analyse these developments within the framework of Cherkaoui's notion of the unintended consequences of good intentions by arguing that these societies will struggle to create citizenship, viable civil societies and democratically transparent political institutions. Social movements are unlikely to survive without becoming defectively embedded in local cultures, institutions and social groups. Furthermore, the growth of citizenship typically depends on a relatively well established and successful middle class—a social class that is largely absent in the region with the possible exception of Turkey. The Muslim Brotherhood gains strength from its long-term involvement with the peasantry at the village level, and hence its more conservative view of social transformation has slowly replaced more inclusive, secular components of the revolution (Mitchell, 1993).

We can think of these developments sociologically by looking towards the unintended consequences of action. Thinking about the problems that have faced China after Deng Xiaoping's reforms, Henry Kissinger (2012: 336) neatly captured the dilemmas that face the aftermath of both revolution and reform: "the frequent outcome of revolution is an increase in central power; the more sweeping the revolution, the more this is true. The dilemma of reform is the opposite. The more the scope of choice is expanded, the harder it becomes to compartmentalize it". Once more, good intentions can have unpredictable and contradictory outcomes. It appears that the dilemmas of the Arab Spring have more to do with reform than with the centralization of state power. At the time of writing neither Syria, nor Yemen nor Libya has a functional government. At the level of civil society, there is evidence of considerable conflict and increasing confrontation. The destruction of Sufi shrines in

Libya in 2012 demonstrated the power of Ansar al-Sharia and the weakness of state agencies against the militia. With the ousting of Muammar Gaddafi and the breakup of his security system, Libya was flooded with weapons from his arsenal, and the country has been plagued by violence relating to ethnic and tribal divisions. These weapons have found their way to Algeria and Mali which have become destabilized in the domino effect of the conflict in Libya. The elections in both Tunisia and Egypt have favoured conservative Islamic forces rather than urban liberal and democratic groups. This result follows from the fact that the Tahrir Square protests were not representative of the whole community especially the countryside where the conservative peasantry form the bulk of the population. The Brotherhood has been successful, because for a long time it has been the main opposition to secular government, the most organised component of civil society and the organization most able to offer the masses both welfare and meaning. Professor Cherkaoui (2007b: 28) is only too aware if the fragility of the Maghreb. He noted for example the unstable situation in Algeria which is faced with "the burgeoning claims of the Kabyle people" and that Morocco was a key factor in the long term prospect of peace in the region. He also clearly recognized how the balance of power in the Middle East as a whole had shifted towards Iran following American intervention in Iraq.

Secularization has been typically associated with modernization, and as a result sociologists have either ignored or down played the importance of religious beliefs and organizations in influencing political movements for reform or revolution. The Iranian Revolution of 1978–79 toppled Muhammad Reza Shah Pahlavi who had pursued a programme of secular nationalism to bring about economic modernization. However, the authoritarian nature of the state produced large-scale opposition among the urban poor who had been displaced from the countryside. While political opposition had drawn strength from left-wing students and the urban working class, Ayatollah Ruhollah Khomeini was able to draw upon the Shi'ite tradition of suffering and martyrdom, and eventually the revolutionary movement was dominated by the religious leadership. This dramatic struggle against the Shah was seen to be a re-enactment of the struggle between Husain the grandson of the Prophet and Yazid in 680CE in the desert of Karbala.

While Michel Foucault travelled to Iran in 1978 and wrote enthusiastically about the revolution as a spiritual opposition that would reshape the self through a religious discipline, other western authors—Maxime Rodinson and Simone de Beauvoir—were less sympathetic. Foucault's enthusiasm for this spiritual revolution was seen subsequently to be naïve and misguided (Afary and Anderson,2005).

For the Arab Spring revolts, there was evidence by late 2012 that "Islamism" was proving to be increasingly influential in terms of the growing presence of conservative interpretations of the *Shari'a* in Yemen, Tunisia and Egypt. This development raises a simple contemporary political question: is the legal status of women, despite modernization and social reform, in decline? The unintended consequences of revolution appear to have been to constrain or indeed diminish women's rights (Voorhoeve, 2012). For example in the Yemen after Southern independence in 1967, the government pursued a robust policy of women's emancipation in the "Corrective Move" of 1969. Women were not only encouraged to acquire education in order to join the labour force, but men were educated to treat women equally in everyday encounters. With the unification of the Yemen in 1990, women's rights have been eroded and the earlier reforms were largely forgotten. Women discovered that they were no longer actively involved in building society but were treated as part of the *harim*, the sacred private space. Islam has emerged as the decisive factor in defining the subordinate place of women in the wider society.

Radical efforts to transform women's status and to enhance their social rights are never easy or complete. Traditional patriarchy often finds ample support in legal notions about "custom and habit". The Arabic distinction between *qiwamah/wilayah* signifying male authority is interpreted by traditional jurists as fundamental to the preservation of social order. Achieving justice in court proceedings is slow and expensive process for women seeking divorce, custody of children or maintenance. Reform projects to remedy the long-standing institutional causes of court room delay (including the outdated administrative procedures, shortage of trained clerks and judges and a large backlog of cases) are rarely successful. Despite the costs and the social difficulties, the demand for divorce is increasing in the Middle East as young couples face considerable challenges in societies undergoing rapid change where traditional assumptions about courtship and marriage no longer fit empirical circumstances. Widespread unemployment means that men cannot easily fulfil their traditional roles in relation to women, and at the same time educated women no longer welcome traditional roles within the family.

Egypt offers an important historical lesson about the changing status of women in the public realm under a succession of liberal, nationalist and fundamentalist regimes. In 1922 when Britain granted Egypt partial independence, the constitutional arrangements made no provision for women's political equality and women, who had been politically active, were expected simply to return to their private spaces and domestic duties. Nevertheless, women came to play a significant part in the development of Egyptian nationalism. World War II had radicalised political consciousness in Egyptian society and in 1944 the Egyptian Feminist Party was formed with a political agenda for social reform, birth control and abortion. Active in the rise of Egyptian nationalism through the Women's Committee for Popular Resistance, women had supported the struggle against the British during the Suez crisis. They enjoyed support from the Islamic modernists who at the time argued that the Qur'an gave women equal social and political rights, and the secular nationalist government of Gamal Abdel Nasser introduced a number of social reforms that enhanced women's status in post-colonial Egyptian society. However in contemporary Egypt, the status of women is threatened by conservative clerics in the committee that is responsible for revising the constitution. For example Mohamed Saad al-Azhari, an ultra-orthodox cleric and follower of the Salafiyya movement, wants to abolish the law that girls under the age of 18 years cannot get married and to remove a proposal that would ban the trafficking of women on the grounds that courts could prosecute parents who arranged marriages for their under-age daughters. It is ironical that these laws protecting women are known as "Suzanne's laws" after the wife of the ousted President Hosni Mubarak. These secular laws from the Mubarak period gave women access to no-fault divorce avoiding long delays in the courts in divorce proceedings, but now conservatives on the constitutional panel argue that Suzanne's laws are in breach of Islamic law.

The development of Tunisia after its Arab Spring uprising is also disappointing from the perspective of the secular liberals who were at the forefront of the movement for social change and political reform. Like developments in Egypt, Tunisia has experienced a swing towards the restoration of the *Shari'a*, but its citizens have also participated in political terrorism. Tunisians have been prominent for example in the attack on the gas plant at Amenas in south-eastern Algeria and their involvement in terrorist activity in Syria and Mali has embarrassed their government which, fearing reprisals from radical elements in the Arab world, wants to remain on friendly terms with both French and American governments. Tunisia has had a long standing relationship with secular France from the early period of French colonialism. With independence in the 1950s, Tunisian governments invested in education and infrastructure, thereby enjoying a relatively peaceful and successful process of modernization. Ironically the social progress, which was not always accompanied by economic growth and full employment, created the foundations for discontent among young Tunisians. While society was modernized, some young people were marginalized and became carriers of radical Islamic views. Yet another irony is that the very success of its education system in raising literacy levels has meant that its youth are fully exposed to radical ideas from around the globe. In 2013 it was reported that weapons are being stockpiled in Tunisia and critics fear that these would be used to oppose the election of a secular government (Daraghi, 2013)

CONCLUSION: FROM GOOD INTENTIONS TO BAD CONSEQUENCES

While it may be relatively easy to start revolutionary activities, it is difficult to bring them to a successful conclusion. Unless and until the euphoria surrounding the fall of authoritarian regimes in North Africa and the Middle East is translated into more permanent civil institutions, including the revival of their economies and in the case of Libya and Syria the re-building of their shattered infra-structure, then the aspirations of those who drove the Arab Spring will be quickly disappointed and shattered. Then there may well be continuing social unrest and eventually a return to military government. By "more permanent institutions", I mean building the basic components of an effective secular citizenship to overcome or counter-balance the divisive force of clan, tribe and religious identity. The rising conflict between Christian Copts and Muslims in Egypt, between Catholics and Sunni Muslims in Iraq, and between Sunni and Shi'ite through much of the region may be the harbingers of more general conflict.

In general with the development of "rentier states" in the resource-rich societies of the Middle East, there has been little development of civil society and in many cases (such as Algeria, Libya, Syria and Yemen) the associational life that is necessary for citizenship has been largely destroyed. In Bahrain, 60% of government revenue comes from oil and gas, and therefore the ruling elite have significant resources to buy the loyalty of its supporters. Saudi Arabia recently allocated $130 billion to the population to maintain its loyalty, but by contrast resource poor countries such as Morocco and Syria have insufficient largesse to guarantee loyalty to the ruling family simply through economic hand-outs. Lack of confidence in Syria's economic future, has meant that, in the first four months of 2011, ten per cent of deposits in the country's banking system were withdrawn. Although at the beginning of the crisis the government had approximately $17 billion in foreign reserves, these reserves have been depleted by some $70 million per week. Syria has issued a variety of "handouts" to pacify its political base, but such measures by increasing inflation only compound the economic problems in the long run. In Machiavellian terms, these regimes must either crush their opposition by force or buy time with the promise of social reforms. The Assad regime has tried both strategies, and the result is a cruel and destructive stalemate. The creation of a modern form of secular citizenship will be a daunting and arduous but necessary political task in offering the necessary institutional framework within which democratic values and political aspirations can begin to be secured and to flourish. Social citizenship, as we know from Aristotle to Max Weber, requires not just institutions but also a civic ethic, and without such values a sense of responsibility for the affairs of the society and commitment to common tasks cannot be sustained. The alternative will be loyalty to clan, sectional interests and clientelism (Kim, 2004).

What of the kingdom of Morocco? So far Morocco has avoided much of the turmoil that has beset the rest of North Africa. While the paradox of good intentions did witness some degree of political and social unrest in the kingdom, it has not been exposed to the conflagrations that have erupted elsewhere. However Morocco does have many of the problems that it shares with the more destabilized states of its neighbours such as a large cohort of young educated people in search of diminishing employment opportunities. As Professor Cherkaoui showed in *Morocco and the Sahara* , it has disputed borders and neighbouring states that are not entirely friendly. The instability in Algeria and Mali may also spread to Morocco. Professor Cherkaoui's gloomy analysis of the difficult situation in the Maghreb from 2007 remains relevant today. What he could not have foreseen was the depth of the global economic crisis that unfolded in 2008, the killing of Colonel Gaddafi and the fall of his regime, the spread of Al-Qaeda elements into sub-Saharan Africa or the bloody and drawn-out crisis in Syria. While left-wing academics assumed that the Arab Spring had broken the hold of authoritarian governments, backed up by oil revenues and the military, both Professors Cherkaoui and Boudon, taking their historical lessons from Tocqueville, recognized that good intentions cannot guarantee good outcomes. We can only hope that the efforts of world leaders to resolve these crises with a mixture of economic aid and good intentions does not further deepen the crisis through unintended consequences.

REFERENCES

Afary, Janet and Anderson, Kevin B. (2005) *Foucault and the Iranian Revolution. Gender and the Seductions of Islamism.* Chicago: Chicago University Press.

Anderson, Lisa (2011) "Demystifying the Arab Spring. Parsing the differences between Tunisia, Egypt, and Libya", *Foreign Affairs* 90(3): 2–7.

Bailey, A. and Llobera, J.R. (eds) (1981) *The Asiatic Mode of Production: Science and Politics.* London: Routledge & Kegan Paul.

Boudon, Raymond (2006) *Tocqueville for Today.* Oxford: Bardwell Press.

Cherkaoui, Mohamed (2005) *Invisible Code. Essays on generative Mechanisms.* Oxford: Bardwell Press.

——— (2007a) *Good Intentions. Max weber and the Paradox of Unintended Consequences.* Oxford: Bardwell Press.

——— (2007b) *Morocco and the Sahara. Social Bonds and Geopolitical Issues.* Oxford: Bardwell Press.

Daragahi, Borzou (2013) "Rise of Tunisia's militants triggers alarm", *The Financial Times,* 1 April, p. 2.

Geertz, Clifford (1968) *Islam Observed. Religious Development in Morocco and Indonesia*. Chicago: University of Chicago Press.

Goldstone, Jack A. (2011) "Understanding the Revolutions of 2011. Weakness and Resilience in Middle Eastern Autocracies", *Foreign Affairs,* 90(3)*:* 8–16.

Hirschman, A.O. (1977) *The Passion and the Interests. Political Arguments for Capitalism before its Triumph.* Princeton, NJ: Princeton University Press.

Frederic Jameson (1973) "The vanishing mediator: narrative structure in Max Weber", *New German Critique,* 1: 52–89.

Kim, Sung Ho (2004) *Max Weber's Politics of Civil Society.* Cambridge: Cambridge University Press.

Kissinger, Henry (2012) *On China.* New York: Penguin Books.

Malthus, Thomas R. (1970) [1803] *An Essay on the Principle of Population.* Harmondsworth: Penguin Classics.

Mandeville, Bernard de (1989) [1714] *The Fable of Bees or Private Vices, Public Benefits.* Harmondsworth: Penguin Classics.

Marx, Karl and Engels, Frederick (1967) *The Communist Manifesto.* London: Lawrence and Wishart.

Mill, J.S. (1991)[1859] *On Liberty and Other Essays*. Oxford: World's Classics.

Mitchell, Richard P. (1993) *The Society of the Muslim Brothers.* New York and London: Oxford University Press.

Olson, Mancur (1963) "Rapid economic growth as a destabilizing force", *Journal of Economic History,* 23(4): 529–552.

Sowers, Jeannie (2012) *The Journey to Tahrir. Revolution, Protest and Social Change in Egypt 1999–2011.* London: Verso.

Tocqueville, Alexis de (1955) [1856] *The Old Regime and the French Revolution.* New York: Doubleday.

——— (2003) [1835 and 1840] *Democracy in America.* London: Penguin Books.

Turner, Bryan S. (1981) *For Weber. Essays on the Sociology of Fate.* London: Routledge & Kegan Paul.

Voorhoeve, Maaike (ed) (2012) *Family Law in Islam. Divorce, Marriage and Women in the Muslim World.* London and New York: I.B. Tauris.

Weber, Max (1976) *The Protestant Ethic and the Spirit of Capitalism.* London: George Allen & Unwin.

Welch, Cheryl B. (2001) *De Tocqueville.* Oxford: Oxford University Press.

Wolin, Sheldon S. (2001) *Tocqueville Between Two Worlds. The Making of a Political and Theoretical Life.* Princeton, NJ: Princeton University Press.

CODA

CROSS-CUTTING FIELDS AND SOCIAL CIRCLES

A Conversation with Mohamed Cherkaoui

Mohamed Cherkaoui

Interviewed by Gianluca Manzo and Peter Hamilton

By focusing on specific topics from particular disciplinary viewpoints, the essays contained in this book have shown how Mohamed Cherkaoui's intellectual path evolved by travelling through a variety of research fields and institutional contexts. In this closing chapter, we aim to provide the reader with an overall assessment of this social and scientific journey via his own account of the route his intellectual career has taken.

With this aim, we asked Mohamed Cherkaoui to provide us with detailed responses to a number of questions touching upon (1) the years of his intellectual training, (2) his transition from education to work, (3) his early work in the field of sociology of education, (4) his relation with quantitative methods, (5) his contribution to the sociology of social mobility, (6), his analysis of the classics of sociology, (7) his

The interview's content and structure were designed by Gianluca Manzo. Peter Hamilton translated Mohamed Cherkaoui's replies from French.

epistemological reflections, (8) his more recent studies on Moroccan society, (9) his editorial activities, (10) the reception of his work, and (11) his contribution to the management of research in France and elsewhere.

Through his patient replies to our questions, Mohamed Cherkaoui delivers, in addition to many personal details, a penetrating, critical analysis of the last fifty years of French sociology and its relationships with the international intellectual community.

EARLY INTELLECTUAL TRAINING

Let us start from the very beginning of your intellectual trajectory. Can you tell us about your education at the secondary level and why finally you decided to enroll in a French university?

I began my secondary education in a Moroccan *lycée* in Casablanca before joining the French *lycée* in Rabat where I studied for the baccalaureate exams. Because I wanted to study architecture at Darmstadt in Germany, I had already taken some steps in this direction during my last year in high school. I was accepted at this school on condition that I would take a German course at the Goethe Institute for a semester.

After obtaining my baccalaureate, I applied to the person in charge of scholarships to the Moroccan Ministry of Education, a small Frenchman whose name I have forgotten. After considering my file he decided this was an inappropriate choice. This person, who had control over French and Moroccan scholarships required that I should enroll in a preparatory class for the entrance examination to the *Ecole Normale Superieure* if I wanted to obtain a scholarship. He could not understand why somebody who had obtained his baccalaureate with such good marks in the humanities would want to give up *belles lettres*. When I told him it was probably too late to apply for a place in a Parisian *lycée*, he sent me away and told me to sort it out for myself. To be honest, I gave up my plans to study architecture without cynicism or bitterness because the friend who planned to accompany me gave it up for family reasons and went to work.

I wrote about this to my cousin who used to be the Moroccan ambassador in Paris and the friend of several ministers in the French government, before later taking up posts in the government of Morocco. He was able to enroll me in the Lycée Henri IV thanks to his numerous contacts, whose extent and influence I only discovered much later when I accompanied him during his visits to Paris in the 1980s and 1990s after he had finally given up any role in government in 1967. It was during these years that I was fortunate to meet many French and foreign politicians visiting Paris who came to visit him and discuss the affairs of the time with him. I was thus a witness to discussions and decisions whose consequences I cannot relate out of courtesy to those people who still preside over their country's destinies.

Thus I found myself in preparatory classes during the year 1965. It was a memorable experience. I was fortunate to have excellent teachers. The courses were like a continual intellectual firework display that fascinated the young provincial I was at that time. But soon I realized that the flowers of rhetoric were fading rapidly and that there are limits to any art or technique of composing combinatorial abstract concepts at which we must excel and which prepare us to make a brilliant presentation on any topic. It reminded me of the teaching of the great Sophists in ancient Greece who enchanted Plato. He had given them a central place in his *Dialogues* and had given them their roles to play and to make statements that are not far from his own theses. But he also criticized them especially because they were a threat to the search for truth. How could it be otherwise? Protagoras for instance was a great charismatic figure whose relativistic doctrine bewitched the mind. This is still the case today. All the relativists of past and present are the heirs of Protagoras. The famous sentence that "man is the measure of all things" actually means that there is no transcendental foundation of truth. This is the foundation of relativism and the expression of atheism that Plato perfectly understood and condemned. It is the beginning of the world disenchantment process theorized by Weber. This phrase echoes the famous *pensée* of the French philosopher Blaise Pascal that "the eternal silence of these infinite spaces terrifies me." I would add that it is also the beginning of the depopulation of the heavens.

Curiously, I later encountered the same mindset and the same virtuosity in some British politicians, alumni of Oxford, that I have met in recent years. I also noted that they share the same exceptional *esprit de* *corps* as the alumni of great colleges and universities whether they be French, British or American.

In addition, the social life of the boarders at the *lycée* was gloomy and unattractive. The fierce competition between the students pushed to them to do ridiculous things or even worse. The most disconcerting and the most disturbing thing was that most of my classmates did not care about how long they spent in preparatory classes. They gave me the impression that they were monks who had joined a regular order for which only eternity counted. This somewhat acosmic and timeless attitude is grandiose in itself.

At the same time, I was witnessing a paradox that I could not solve. As a sign probably of the time before the events of 1968 that had shaken the foundations of French society, the majority of my friends were members of the *Union of Communist and Trotskyist students*, apart from two students affiliated to the SFIO (*Section Française de l'Internationale Ouvrière*) which later became the Socialist Party, two Gaullists, three members of the Union of Catholic students and some skeptics lost like me in this century in which doctrinal extremism was dominant. Some of them made up the generation of leftists of the *Ecole Normale Superieure* in the early 1970s for whom the little red book of Chairman Mao became the gospel.

When I see young men who sacrifice years of their youth to cultivate excellence, and when I see the cream of the French elite that peopled the *Ecole Normale Superieure* fall prey to such absurd and farcical nonsense, I do not know how to relate so much intelligence and ingenuity to such extravagance.

I am not far from thinking that it was the same thing for my comrades as what Tocqueville had said of French intellectuals of the eighteenth century, about the avant-garde and theorists of the French Revolution: the unreality and eccentricity of their political projects can only be explained because they lived outside their own century, cut off from business and public administration in which they took no part unlike English intellectuals of the same period.

At the end of the year, I decided to take the examination for the propaedeutic certificate from the Sorbonne, and passed. At the beginning of the next academic year, I enrolled in philosophy and sociology,

two subjects which had common courses and qualifications. Some very few students chose to combine philosophy and political science, law or economics. Following two distinct types of study simultaneously is not a French specialty. It is found in Germany and elsewhere.
Can you also tell us why you decided to receive your university training in these disciplines?

The choice of philosophy is easily explained: I had tasted the delights of the dialectic of virtuosos who were able to locate the new ideas of contemporary schools of thought, when structuralism and Marxism prevailed in France, into the great tradition of Western thought that they placed in a line going back to Plato and the Presocratics. This assuredly cultivates and sharpens a form of intelligence; but it often leads to the development of a superficial talent and to insularity.

The choice of sociology was almost self-evident. One of the two philosophy teachers at the Lycée had started us reading the classic texts of the discipline that had opened up new paths for me. In addition, I felt the need to confront reality and not stay in this dangerous ethereal sky of ideas and combinations of philosophical concepts. Keeping young people away from the issues of their time was one of the pedagogical principles of Jesuit teachers, the masters of all that counted in France ever since the late sixteenth century. It was a little later that I discovered that many French sociologists and anthropologists had first received training in philosophy. This was the case for Durkheim, Mauss, Levi-Strauss, Aron, Boudon, and Bourdieu.

On an intellectual and personal level, what French intellectuals and professors played a central role during this stage of your training?

At the Sorbonne, the two great tenors of the time in sociology were Raymond Aron with whom I was associated, albeit from afar, until his death, and Georges Gurvitch—who disappointed me because of the lack of attention he gave to his courses and the violence of his opposition to Lévi-Strauss, his competitor who taught at the Collège de France. However, in my opinion, one should remember the work of Gurvitch for its beautiful reflection on the multiplicity of social time in the style of Halbwachs, and for his work in sociology of law and morality that is in the direct line of the Durkheimian tradition, even though he was critical of the master of French sociology. He also helped us to discover Sorokin whom he frequently cited, especially to warn us against "quantophrenia." Gurvitch thus dangerously accentuated the allergy of students to quantitative methods. This was not Sorokin's aim, for although he warned against the worship of numbers, he used such methods frequently himself.

My central memory of Aron's teaching was his analytical ability that allowed him to understand events, to place them in their political and geopolitical context, and to see them in a way enlightened by sociological and political theories. I cannot forget his remarkable course on the sociology of International Relations and his *Paix et Guerre entre les nations (Peace and War between nations)* - which prefigured his *Penser la Guerre. Clausewitz* - which opened a field of thought that I use in my current work in geopolitics. Much later, when I had the opportunity to attend Aron's seminar, I had the opportunity to meet the brightest Aronian intellectuals who have played and still play a central role in French political and intellectual life.

The Savage Mind by Claude Lévi-Strauss was one of my favourite books. This is a response to issues raised by the Kantian philosophical tradition that Durkheim's sociology inherits and claims to solve, and in particular *The Elementary Forms of Religious Life* and *Primitive Classification*. The book was also a response to criticism of the analytical approaches of the social sciences developed by Sartre in his *Critique of Dialectical Reason*.

Like many students, I tried to understand the lessons we were supposed to learn from the structuralism that dominated in France at the time and that was the great intellectual fashion alongside Marxism. I confess that I did not understand much of it despite my repeated efforts and my extensive reading that ranged over linguistics, anthropology and even extended to some mathematical formalizations of kinship. Some high priests of the two doctrines of French intellectual orthodoxy went so far as to attempt to provide a synthesis of these two hegemonic currents. Structuralism even engulfed psychoanalysis with the blessing of its leading shaman, Jacques Lacan, the founder of the Freudian School of Paris whose seminar was attended by "all of Paris". But what remains today of these monumental but fragile edifices built by these architects of thought?

In philosophy, only a few rare historians and philosophers of science held my attention to the point where after my degree in philosophy, I had prepared a dissertation for the *Diplôme d'Etudes Supérieures* (Diploma of Higher Education) on Descartes' *Géométrie* at the Institute of History of Science at the Sorbonne. By placing Descartes' treatise in its historical and mathematical context, and by taking into consideration the great Cartesian science project that has such a remarkable unity, I was discussing and putting myself at a distance from the thesis of Jules Vuillemin, a distinguished epistemologist and professor at the Collège de France who defended the purely algebraist point of view whilst I thought that it was about the invention of a new discipline of geometry. It is intriguing to note that it was this same Vuillemin who planned the path that led Michel Foucault to the Collège de France. It was partly thanks to these historians of science that I felt the need to go back to studying mathematics.

Just after this I had the chance to get a German scholarship that allowed me to learn German and take courses in several universities, in Konstanz am Bodensee, Tübingen, Frankfurt, and Göttingen. It was during this trip that I had planned to write a doctoral thesis in history and philosophy of mathematics, particularly on the synthesis of Ernst Steinitz and his famous thesis on *Algebraische Theorie der Körper* (Algebraic Theory of Fields, 1910), that I had translated during my stay in Germany.

My trip also allowed me to discover the rich and fascinating German and especially Austrian literature of the turn of the nineteenth and twentieth century that I continue to read and reread today.

After two years in Germany, I returned to Paris where I had to make a definite choice about which path I should follow, the philosophy of mathematics or sociology.

The only two supervisors who taught history and philosophy of mathematics at the Institute for the History of Science were Suzanne Bachelard, daughter of the brilliant epistemologist Gaston Bachelard, and René Taton, but they lacked the intellectual breadth I was looking for to definitively take that direction. Taton, whom I had seen on my return from Germany, was even kind enough to offer me a job as a researcher at the CNRS during the preparation of the doctoral thesis that I had discussed with him. But his approach to the history of mathematics, that I found linear and shallow, did not attract me. I almost went to work with I. Bernard Cohen at Harvard.

I think I needed a mentor, a personality on the scale of Alexandre Koyré, all of whose admirable books I had read. He fascinated me with the extent of his knowledge, the depth and clarity of his superb analyses of the history and philosophy of science. The stars of philosophy in France in the late 1960s, Dérida and Foucault in particular, seemed to me superficial compared to Koyré although I liked both of Foucault's doctoral theses on the *History of madness* and the *Birth of the clinic* and the early work of Dérida on the origins of Husserl's geometry. *Les mots et les choses and l'Archéologie du savoir* (*The Order of Things and The Archaeology of knowledge*) and Title*??????* were, in my view, superficial books written by the brilliant Foucault to impress and thus be elected to the *College de France*.

However, I remembered that I had browsed through the manuscript of the doctoral thesis of Raymond Boudon on the mathematical analysis of social facts when I was a student at the Institute of History of Science from 1967 to 1968-9, thus just before I left for Germany. In addition, in this year, 1971, I learned by chance he was a professor at the University of Paris V. I decided to attend his courses and seminars which were at the time on the analysis of causal structures and social mobility, subjects on which he had produced two books.

I also discovered that, at the same university, there was a Department of Teaching and Research in mathematics and statistics whose courses were geared towards the social and human sciences. I had requested an interview with Marc Barbut, Director of this department. He spent a considerable amount of his time with me during which I told him of my intellectual journey and asked for advice. He suggested I should register for a degree in applied mathematics while completing my training in sociology. He offered me a post as research assistant which was my livelihood for two years. The work I carried out introduced me to computers in part thanks to Jean Pisani Ferry, a professional engineer, whose acquaintance I had made. Jean eventually became a prominent economist and currently holds a high position of responsibility in the current French government. This work mainly took place in the evening. I had enough time to take maths courses and begin research for my PhD dissertation.

INTELLECTUAL TRAINING: THE DOCTORATE TIME

Let us talk more about your graduate training. Who supervised it and what topic did you chose to address?

A clarification is needed here: at that time we had to prepare two doctoral theses for examination. The first was known as the 3rd cycle doctorate (*doctorat de 3ème cycle*), broadly equivalent to a Ph.D in other countries; the second was for the doctorate in humanities and human sciences (*doctorat ès-lettres et sciences humaines)*, a higher level doctorate, which no longer exists in that form as it was phased out in 1984.

It was Raymond Boudon who supervised my PhD thesis. Moreover he suggested that I focus on secondary analyses of what, at the time, was considered the largest international survey in the sociology of education. He had copies of the data tapes and provided them for my use. We saw each other about twice a month to review the results of my analysis.

Today's scientific researcher who is able to analyze data from any large survey on his laptop in record time, could not imagine the immense difficulties we encountered to do the same thing. We only had at the time one big and powerful CNRS computer that was installed on the site of the University of Paris Sud in Orsay. It was impossible to use it during the day on a regular and constant basis due to the large number of users, its limited memory and the size of our samples. The only solution was to wake up very early and take the *Métro* so as to be at Orsay by five o'clock in the morning. The rare individuals who needed a large amount of computer memory, such as me, could then submit their data analysis as many times as they wanted until eight o'clock. After this time, we had to pack up and return to Paris. None of us could dream that one day we'd have a computer as powerful as the current supercomputers that can run the craziest simulations one can imagine in astrophysics or meteorology.

One should also be aware that, at the time, it was necessary to have credits to use the computer. The University of Paris V gave me some; but they were insufficient. Fortunately, the *Conservatoire National des Arts et Métiers* (National Conservatory of Arts and Crafts) where I taught a course also gave me some. Without their generosity, I would never have been able to do the hundreds of analyses used in my PhD thesis.

What do you consider to be the crucial personal and intellectual events and influences during the preparation of your PhD dissertation?

My supervisor taught me that a good thesis is one where each chapter can be turned into a journal article. According to him, this is the proof that the thesis is rich and novel. It's still the rule that I have always respected, even later for all my books. While I was working on it, I published articles drawn from my data analysis and others on the history of sociological theory; all of them designed to support my application for the CNRS.

My encounters with researchers in the hard sciences, mainly physicists and chemists at Orsay, allowed me to improve my knowledge in applied mathematics and numerical analysis.

I also had the opportunity to be in touch with Basil Bernstein, whose work was of interest in my own research. He was intellectually open and very generous with his time, answering all the questions I asked him in our correspondence while I was still just a young doctoral student without status. During the preparation of my doctoral thesis, I devoted a long critical analysis to his books and those of his colleagues.

Can you tell us who were the members of your jury and what memories you have of your PhD defence?

In early 1975, two days after submitting the manuscript of my PhD thesis to Boudon, he phoned me and said he was satisfied with the work and the composition of the jury would take care of itself. Besides him, the supervisor, he asked the mathematician Marc Barbut and Alain Girard, a demographer and sociologist of education, all professors at the University of Paris V, to take part.

A few years later, when, in early 1981, I had to defend my doctoral thesis ès lettres et sciences humaines, we had roughly the same jury, Boudon, Barbut, Girard, but also François Bourricaud and Viviane Isambert-Jamati.

Thesis defence is a rite of passage in which senior figures evaluate a young person who aspires to join their circle. They accept or reject the request with discretion in their evaluations that are included in the report of defence. This report pursues the new doctor until the end of his professional life. But the thesis defence is also an opportunity for the jury to put on good performances as actors and to shine; because they have an audience. Do not forget that my thesis was publicly defended in the beautiful and solemn Louis Liard hall of the Sorbonne.

FROM EDUCATION TO WORK

After the completion of your doctorate dissertation, did you consider going back to Morocco?

After the defence of my PhD thesis, I had to start thinking immediately of preparing the thesis for the *doctorat d'Etat ès lettres et sciences humaines*, which was necessary for anybody who wanted to become a university teacher. I registered with Boudon as my supervisor.

I did not think about returning to Morocco although a good friend recommended me for a post as a Prefect at the Moroccan Home Office, which was seeking to recruit young PhD graduates. For my part I wanted to pursue a research career in France. The only possible way was in the CNRS. The alternative, teaching, did not really attract me.

In order to earn my living before I could compete for a position at CNRS, I agreed to work as a researcher in a private multi-purpose consultancy. I had met several of its staff including the great designer Pierre Paulin who was well known for having redecorated the Elysée Palace at the request of Madame Pompidou. We had not worked together since, at the time, he was designing new bathroom products for the Alibert company, while for my part I was involved in urban sociology with one of his architects. The work we had to do was to provide a historical sociology of the Temple from its construction by the Knights Templar in the thirteenth century, its role as a prison for the Monarchy during the French revolution, and its destruction and replacement in the mid-19th century by the current Square du Temple, in the Third arrondissement of Paris. That is, I helped with architectural surveys of the archives to provide a description and explanation of the functional changes in the constructed edifice.

Did you spend any time abroad to complete your training?

Apart from my long stay in Germany, I could not complete my education and my experience until later when as a young researcher at CNRS, I received a grant from the British Council to spend a full term at the University of London, at the invitation of Basil Bernstein with whom, as I said earlier, I was in contact since my PhD. He received me in his office where we spent an entire rainy afternoon drinking white wine and smoking non-stop. Our discussions were about Parisian and British intellectual circles. He always came back to his theory of codes and accepted its relationship with Durkheim's theory of two types of solidarity as I understood it. We saw each other several times outside of the university during my stay.

I also spent a Term at Nuffield College, Oxford as a visiting scholar where I had the chance to meet colleagues from different intellectual backgrounds at Nuffield as well as in other colleges where I was invited. I found that the lifestyle, type of transmission of knowledge, the selection and the construction of Oxfordian excellence corresponded to certain propositions derived from the theory of Bernstein. Later, I spent time in a number of universities as both professor and visiting professor.

What was your first job as researcher, teaching assistant, or professor?

My first job was as a research assistant at the University of Paris V during my PhD. At the same time I taught a course at the Conservatoire National des Arts et Métiers. I was attached to the chair of Professor Ducassé, a philosopher and historian of technology. He had not been elected to the leadership of the Institute of History of Science at the

Sorbonne. Too many personal interests had frustrated his candidacy for a function for which he was well prepared. This is a common story in academic circles not just in France but also elsewhere.

During his stay in the United States in the early 1970's and 1980's Boudon asked me to replace him at the University of Paris V and University of Geneva.

Can you describe the circumstances under which you applied to the CNRS?

I applied for a position as a CNRS researcher having published several articles. This was in 1976. My candidacy was strongly supported by Jacques Lautman and the rapporteur of my application, Doris Bensimon. One morning, the president of the Sociology and Demography section of the Committee of the CNRS called me to tell me that I had been ranked among the six candidates to be appointed by the directors. It was obvious that my choice of a unit of attachment could only be that of the *Groupe d'Etudes des Méthodes de l'Analyse Sociologique* (GEMAS), headed by Boudon. The following year, I was asked to teach a course in social science methodology at the Institut d'Etudes Politiques in Paris. I took this on for ten years before leading a research seminar in the same institution. The French Ministry of Planning also offered me a job as a consultant. With an economist colleague we were responsible for managing all the applications for research funding in social policy for the ministry.

EARLY WORK

During the 1970s and 1980s, sociology of education was your main research interest. What was the state of sociology of education in France at that time?

I explained the circumstances under which I began research in the sociology of education earlier. When I began my research career in sociology in France, the positions were defined with two poles that had the work of Bourdieu and his team at one end and that of Boudon at the other, who had always been a liberal loner who did not attempt to build a school. The GEMAS that he created and directed was a kind of gentleman researcher's club whose members must only respect one rule: the excellence of production set by international standards. Boudon had never asked anyone to take up a particular position. In GEMAS, there were liberals, people committed to the left and even a member of the French Communist Party.

Bourdieu was undoubtedly the most popular in France and abroad as I would note during my many trips outside of France. He was brilliant, attractive. At first I had very cordial relations with him. We used to have long discussions in his office or in the hallways of the fourth floor of the Maison des Sciences de l'Homme on boulevard Raspail, where our offices were next door to each other.

Unfortunately, our relationship became execrable following the publication of my second book, on the changes in the education system in France (*Les changements du système éducatif en France*) in which I was questioning some of his theses on reproduction by subjecting them to the test of analysis of longitudinal data. We remained at odds for twenty years until his serious illness, just before his death, when, by chance, we met at the Maison des Sciences de l'Homme. We spoke to each other in terms that were full of a civility and serenity that were far from the virulent correspondence we had exchanged twenty years earlier.

This sad episode speaks volumes about the difficult scientific dialogue with Bourdieu who had given up the use of reason. He had moreover made sure to exclude from his inner circle some of his former followers who had dared make comments that were unacceptable in his eyes. In comparison, let me recall the intellectual nobility and exemplary behaviour of Michel Crozier, the most brilliant French theorist of organizations. He never took umbrage at the critical discussion that I devoted to his thesis on the conditions of the reforms in France and their consequences. While leading a research unit composed at the time of excellent researchers on whom he could have drawn to fill the position of professor at the European University Institute in Florence, he chose instead to ask me as he considered me worthy of representing French sociology. I had other projects and had to decline the offer.

I had never been attracted to Pierre Bourdieu's way of working nor to his weak theories, which often consist of hyperbolisations of sensible remarks translated into the sophisticated language of philosophers and which remind me of the rhetorical exercises and word games of my first year as an undergraduate. His explanations were not satisfactory because they were based on unreliable and poorly analyzed data. The analyses that he had carried out by some of his colleagues whom I met in the new computer rooms in the basement of the *Maison des Sciences de l'Homme* did not go beyond simple cross tabulations and percentages or even systematically exploited factor analysis.

This methodology was very fashionable thanks to the malign genius of a brilliant French mathematician and statistician, Benzécri, who had seduced, God knows how, this new generation of researchers in the social sciences and humanities. This false Leibniz of modern times proposed a "*mathesis universalis*" able to answer any questions of the poor social scientists who lacked the means to answer them, and who were also unable to question empirical data intelligently. If you open both volumes that Benzécri devoted to the analysis of data, you will be amazed by his encyclopedic references that range from St. Thomas Acquinas to Linnaean classifications, physical theories, and all the social sciences and humanities. You will then understand just how seductive he could be.

What was the target of your research in this field?

The only audience I was aiming at was that of my peers. Besides, I was living in the closed world of research. If I cared about social issues it was only as sociological problems and not as opportunities to change the world. I noticed that those who shared the philosophical perspective of social reformers or revolutionaries were especially concerned with doing militant sociology and not scientific sociology. Their research was at best similar to the sociographic practice of the social hygienists in the early nineteenth century. This is pre-Durkheimian sociology, a compassionate sociology.

A lot of current sociological research on urban planning, poverty, inequality, on marginal groups, etc., does not go beyond this level and contributes almost nothing to scientific knowledge. Policymakers, who believe they can be used to conduct informed social policy, treat them royally by providing budgets that are in some cases very substantial. I feel sad that there are so very few who learn from the past and that the same mistakes are repeated indefinitely.

Could you tell us more about your views on the debate between Raymond Boudon and Pierre Bourdieu with respect to inequality of educational opportunity?

The very same question was put to me by Peter Abell during a dinner at the first meeting of the European Academy of Sociology. There is no simple answer. Bourdieu was convincing because he had an argument of great simplicity that everyone could understand even though it was expressed in academic language. It was also in the *air du temps*. His militant sociology was a constant accusation that appealed to the audience of clerics whose main motivation is often resentment but in some cases generosity as well.

Boudon was too complex for anyone looking for an easy argument to reproduce. His endless distinctions and intellectual prudence were barely tolerated by the average reader. His sociology was not based on resentment and social critique.

For my part, I confess that I have never read any of Bourdieu's writings where he offers a scientifically based explanation of educational and social inequality or any other sociological problem. Everything about him is reduced to social determinants, to mechanisms of socialization that are also overdetermined, to black boxes such as *habitus* (a term borrowed from Max Weber regardless of the context in which the master of German sociology had used it), the use of conspiracy theory by those he calls the ruling fractions of the ruling classes! It was only much later that he would realize his mistake and try to take account of the actor in *Choses Dites (In Other Words: Essays toward a Reflective Sociology,* Eng. ed. 1990*)*. In addition, the Bourdieusian machine to explain reality was so well oiled so that it could apply to any class of phenomena. What could be better? A universal panacea, similar to factor analysis was now available: put any data in your machine and you will get results that you can interpret according to your needs, in an opportunistic way. You will notice that many followers of the "theory" of Bourdieu take it and apply it ritualistically in the most diverse and varied fields. It is such a caricature that it's downright laughable. The masterful rhetorical talent and brio that characterizes Bourdieu's writings are absent from those of his students.

Far be it from me to say that all Bourdieu's intellectual production should be discarded. Some anthropological works on the Kabylie and philosophy are excellent. His occasional studies on a range of subjects, on Cassirer or Panofsky for example, are important. Other modest empirical works such as that on photography are of a classic but illuminating nature.

It seems that Bourdieu was actually the victim of the success he had with French public opinion and later specific circles abroad. I am sure he would have contributed to the advancement of sociological knowledge if he had limited himself only to his peers, the sole essential audience for any scientific discipline. This is the great dilemma of all researchers in the social sciences and humanities, unlike other disciplines. It is also the biggest challenge facing any scientific institution that risks collapsing if it does not pay attention to the choices of its members and if, instead of using strictly professional criteria, is lulled by the siren song of the media. We must never forget that our institutions are fragile.

A physicist communicates only with his peers. He only requires the recognition of this circle. Of course he may well be concerned with popularisation when he reaches a certain age or when his intellectual abilities weaken. This is not the case with the sociologist, the economist or the historian who constantly have to choose between these two audiences. Our colleagues are sometimes tempted to choose the public rather than their peers. They prefer the recognition and legitimacy of the media and the general public as if they were politicians. It is a choice that generally proves fatal for scientific research. Have you noticed that they often subjugate our colleagues? Basically, they would rather be advisors, powers behind the throne. I have noticed that some colleagues are obsessed with power.

For Boudon however, there is no panacea, no universal methodology that applies to all, no general theory of society, because each class of phenomena requires a specific methodology and specific explanations. The phenomena of mobility require special methodology. Some social processes need to be understood and explained using simulation models, as he admirably demonstrated in his *Inégalité des chances* (Eng. ed. *Education, Opportunity and Social Inequality* (1974)). How could one imagine that this book, which completely revises our entire perspective on mobility, with an unparalleled scientific rigor that is technically difficult to access, could be read by the average person? This is a book that is intended only for our peers.

In your opinion, what is your main contribution to the sociology of education?

The contributions of my first book titled *Paradoxes de la réussite scolaire* (Paradoxes of educational achievement) are modest. I think I questioned some false beliefs that dominated the sociology of education: about selection, about the exemplary achievement of some students from disadvantaged classes in the most selective programmes and schools, about their educational plans, about the futility of some teaching methods that were thought to be crucial for the educational outcomes of schoolchildren, about the crucial role of teacher training and excellence especially for schools with socially disadvantaged students, and about the need for social diversity especially for disadvantaged children. I also demonstrated that certain beliefs—such as that when the number of students in a school class decreases, (a thesis supported by the unions), or when the number of hours of instruction in a subject increases, the educational achievement of school students will automatically increase—are false.

I was only heard by a few colleagues who were kind enough to review my work in academic journals. When I published my first book, only the right-wing newspapers praised me because I stated, based on analysis of data from seven European and American educational systems, that selection is more beneficial to children from disadvantaged classes than other classes; it is even more beneficial to the most disadvantaged when its criteria are clearly visible and easy to understand than if they require the sort of informed decoding of which only parents with higher levels of education are capable.

I explained in fact why the school of the Third French Republic, as it had been conceived by Jules Ferry, had been more socially just. To be honest I only formulated my thesis in this way later when the righteous left attacked me. They accused me of being a right-wing sociologist instead of taking the trouble to read what I had written. I remember a meeting at the highest level in a ministry in Paris, during which I was attacked by both government officials and trade unionists. I had to explain to them the relationship between my results and the republican ideal; more importantly, it was not until a very eminent socialist figure who was present during these discussions confirmed my comments that people start to listen. The support of this personality had earned me a tempting offer to head a large institute specializing in education, which I had declined.

My second book on the changes in the education system was better accepted—except by Bourdieu and his followers, because I falsified his hypotheses. Using rational choice theory I tried to describe and explain the the country. The great Mass attended by the Moroccan government as well as the King's advisers and all the senior civil servants, during which I presented my research results did not help much. My discussion and my proposals have been superbly ignored even though one of the king's advisors, a friend of mine who unfortunately died just after a withering lung cancer, assured me that he would send a synthesis of my speech to the king. My book *La Crise de l'Université* (The University in Crisis) published in 2011 did not help in tackling the serious issues in the Moroccan educational and research system. But the power of the feudal groups is such that no fundamental reform can be carried through. I have always said this and repeated it in several articles and interviews in the Moroccan media. I broke down and analyzed for example almost all of the intellectual production of Moroccan University Professors and researchers as well as teachers and non professors from 1960, the date of establishment of the first University, to 2006. The wealth of results that I collected allowed me to falsify a wide range of hypotheses, and to strengthen and put forward others on the intellectual markets, about the paradoxical consequences of public policies, those of Weber, Lotka, Simon, Merton, Ben-David, Bourdieu, Boudon etc.

QUANTITATIVE METHODS

In your research on education and on the analysis of large-scale data-sets, w hat quantitative techniques did you use?

Basically, we were self-taught in quantitative sociology. The statistics courses that I followed helped me a lot. But in practice, one had to learn on the job, starting with the simplest models and then going on to the most complex. In my early work I used linear and nonlinear regression models, those of analysis of variance, covariance, with transformations of dependent variables according to the procedures of Box and Cox. I even published a purely technical article on these transformations and their sociological significance. I went on quickly to log-linear models in which a friend of mine, Jim Lindsey who had come from Imperial College in London and wanted to do a PhD in sociology, had initiated me in the early 1970s. I read the first articles and books on statistical analysis of categorical data such as Cox, Plackett, Haberman, etc.

In my work on changes in the education system, the methodological approaches were different. I applied laws and dynamic models to describe longitudinal data. It is much more complex.

What was the state of quantitative sociology at that time in France?

In the early 1970s, the training of French sociologists and political scientists did not prepare them to use quantitative approaches. Those who ventured to do so were limited to cross-tabulations and intuitive analysis of percentages. The most quantitativist researchers used rudimentary techniques or at best the most basic statistical models offered by the first versions of the software such as OSIRIS, SPSS and BMD.

But most took refuge in what I call the asylum of ignorance, that is to say, factor analysis. I remember a research engineer who worked in a large Parisian consultancy, which built polynomial models saturated in n equations to "explain"100% of the variance!!! This wonderful tour de force is the sign of the absurdity of blind methodological approaches that actually reflect the poverty of thought that sought to hide behind highly technical approaches.

I would add, however, that some rare sociologists and anthropologists used more complex statistical or mathematical models such as graph theory in some essential work on social psychology, those of lattice algebra which Marc Barbut introduced to us to process partially or totally ordered variables or the game theory which was taught us in the undergraduate degree in applied mathematics.

Did you have any international contacts and/or collaborations that helped you to develop your quantitative approach?

By devoting his higher doctoral thesis to the mathematical analysis of social facts, and as a result of having run a seminar for two years that he later published under the title *Mathematical Structures of Social Mobility*, Boudon showed us the way. The teachings in mathematics and statistics of Barbut and others were original. Such lessons were concentrated in only a few enlightened locations in Paris. Finally, a small number of American colleagues, who visited us at GEMAS and who had mastered quantitative models in relation to rational choice theory, helped me to understand and use them.

SOCIAL MOBILITY

At the end of the eighties, social mobility started to become a central topic in your research. What links do you see with your early work on education?

Actually, my interest in social mobility began in the early 1970s when I attended Boudon's seminar on this subject which led on to the publication of two major books, *L'inégalité des chances* of 1972 (English edition, *Education, Opportunity, and Social Inequality: Changing Prospects in Western Society*, New York 1974) and *Mathematical Structures of Social Mobility* (1973) for which I had made several simulations using stochastic models at Boudon's request.

In fact, it is difficult to conduct research in the sociology of education without being concerned with social mobility. Why? Because we always end up by questioning the influence of education on the change of status, on social promotion. One of the Durkheimians, Paul Lapie, who conducted research on education, was the first to construct and analyse mobility tables. I wrote an article on him in order to rescue him from being unfairly forgotten. Moreover, at that time I was finishing my second thesis on the dynamics of the French education system, and I was interested in how Tocqueville and Durkheim conceived the consequences of change, which had led to some of their publications. I could not fail to come up against the problems of anomie, frustration, political instability, the redefinition of the meaning of institutions by their users. This means that it was also my reflection on the history of the theories that got me interested in the consequences of mobility.

Compared to the most common forms of research done in this field at that time, you approached social mobility in terms of its consequences, in particular with respect to feelings of justice and political behavior. Why did you choose to study these aspects?

Subsequently, I collected empirical data on the political consequences of mobility and subjected them to secondary analysis. I collected all the available data published in journal articles and those that my colleagues from the CEVIPOF (a CNRS and Fondation des Sciences Politiques research unit), Daniel Boy and Nona Meyer, had sent to me. My interest in this topic would lead me later to propose an interpretation of Tocqueville's work.

Moreover, at GEMAS, we conducted a major survey on the perception of inequality. We had a contract with the French Ministry of Planning to conduct empirical research based on interviews as well as a questionnaire survey on that topic. Some of the GEMAS members took part in the data collection and in writing a report under Boudon's supervision and intellectual influence. It offered me the opportunity to write a long report on social mobility and fairness that I published in condensed form as an article. I discovered a new field of thought that already had strong intellectual traditions and a specific methodology.

Almost simultaneously, Boudon asked me to write two chapters of the *Traité de sociologie* (1993), the first on stratification, the second on social mobility.

In 1995, you edited a special issue on social mobility for the Revue Française de Sociologie. *Could you tell us more about this project*?

I suggested the idea of a special issue on mobility for the *Revue Française de Sociologie* (RFS) to my late friend Philippe Besnard. He asked me to work with Louis-André Vallet on this project. Vallet had just published an article in the RFS and been awarded his PhD on women's mobility with Boudon as his supervisor. He had mastered and applied the odds ratio technique to data on mobility. He is a very good technician and a conscientious researcher.

THE CLASSICAL SOCIOLOGIST

Over the years you have written extensively on Durkheim and Weber, and, more occasionally, on Tocqueville and Hobbes. Why did you pay so much attention to the classics of our discipline?

In fact, my interest in the sociology of education and inequality had led me to a deepening interest in the work of the founding fathers of the discipline, especially in Durkheim and his school, and later in Weber.

In truth, throughout my life as a researcher, I have carried out both types of research.

I would point out that I am not an historian whose work it is to appraise texts, to date them, to assess their truth and to offer an interpretation of them. No. History for me is more of a reservoir of ideas, issues and experiments conducted by people who have faced problems, proposed solutions, and also made mistakes. In short, in my opinion, history is a laboratory. This is not a tomb but a living treasure of inexhaustible resources that will answer the questions one wants to ask. The best way to ask them is to be at the forefront of research, to know the problems faced by contemporary theories before consulting the past and seeking its help. But this view of history is not my own idea. It is found for example in the work of Georg Cantor and Joseph Schumpeter. Read for example the article "Grundlagen einer allgemeinen Mannigfaltigkeitslehre" (*Foundations of a general theory of aggregates*) or the mathematical and philosophical papers on infinity by the founder of set theory; you'll be edified. You might also browse the wonderful pages of *History of Economic Analysis*.

Are there any of the classical sociologists that you consider to be especially important in your vision of sociology?

I devoted several publications to Durkheim and Weber, and less to Tocqueville. I also spent a lot of time on studying Schumpeter, as both economist and sociologist. When we were preparing the *Dictionnaire historique de la pensée sociologique*, I suggested to Boudon that I should write the entry on Schumpeter, but he had already asked another colleague to do it.

I was in a sort of dialogue with these masters of the past. I questioned them every time I faced a theoretical problem. This does not mean that I was not in dialogue with living colleagues as well …

What is the sequence in which you read and discovered the classics?

The periodization of my publications is actually misleading. It was my work on Durkheim that appeared first. In truth though, I had made a huge study of Max Weber's work when I was in Göttingen. One of my German friends had greatly encouraged me by giving me books by Weber which were out of print. On my return to Paris, I wrote a long paper on the education, power and bureaucracy of the Mandarins in China based on Weber's writings. The Weberian idea that I was developing is related to the existence of macro-social correlations between types of power, modes of elite selection and forms of legitimation. In fact the case of the Mandarins is an example of Weber's thesis that applies to several different social configurations, whether the Greek aristocrat, the new democratic Greek parvenu who sought the teaching of the Sophists, the cleric of the Middle Ages, the generalist gentleman of the eighteenth century, and the specialist in industrial societies. One can make the same comparisons by taking account of forms of democracy. I should improve it and publish it, but circumstances have never been right. It still sleeps in my filing cabinets.

It seems as if Pareto played a smaller role in your thinking than Durkheim and Weber. Is this correct?

You are right. However, when in 1998 I started writing a book on Social Stratification that I have not as yet completed, I devoted an entire chapter to the Paretian conception of stratification and mobility. In addition, two years ago, I had to write an article on social mobility and its consequences in Pareto's work as well as its legacy for contemporary sociology for the special issue on him of the European *Journal of Social Sciences*. I collected all the documents I needed and did all the necessary reading. Because of lack of time and since I had to complete other more urgent work, I had to abandon it.

Did Philippe Besnard, another great scholar of Durkheim, have an influence on your own reading of this author?

Philippe Besnard had a post at the Maison des Sciences de l'Homme. I had met him in 1973 when I submitted my first article to the *Revue Française de Sociologie*. As an editorial member of the RFS, he had read it. He contacted me at GEMAS to discuss the form and substance of the article. It was with intelligence and exceptional generosity that he did this. I did not know at the time that he was preparing his doctoral thesis on anomie. It was when I suggested another paper to the RFS which related to Durkheim that I discovered his immense knowledge of Durkheim and his school. We became inseparable and loyal friends until illness and death separated us. He joined the CNRS late in life. Then he came to be with us in GEMAS before leaving to direct the *Observatoire sociologique du changement*. Despite the real success of his efforts to make this unit one of the best research groups in sociology, he had the bitter experience of facing an ungrateful coup from within that tried to dislodge him.

There is no doubt at all that there were reciprocal influences on our interpretations of Durkheim. The obituary that I asked Boudon to write on his life is a proof of the friendship between us, our complicity and our mutual intellectual consideration. In fact we were a trio with Massimo Borlandi, one of our best historians of sociology who is a person of great intellectual rigor.

EPISTEMOLOGICAL RESEARCH

Since the mid nineties, the micro–macro link and the theory of explanation became central lines of your research. What is the connection with your early work on inequality of educational opportunity and educational system?

The problem of explanation has always been one of my concerns. I guess it is for everyone except for those who believe that science is limited to description and classification, and cannot go beyond that. The great minds share this vision, such as Pierre Duhem, who was in some ways the successor of Comte, or closer to home the economist Paul Samuelson, at least in his statements during debates about the epistemology of economics.

In my early work on education and mobility, I encountered this problem in the use of rational choice theory. It was clear to everyone that we had to decide between explanation based on the determinism of structures or by rational although forced choice. But I was unable to move from the individual to the collective level. I stayed at the individual level. I looked at the solutions suggested by physics and economics. The first did not allow me to understand the emergent phenomena that are common in sociology, perhaps due to my ignorance; and the second were unsatisfactory.

From 1987 to 1988, I made my point of view on the subject increasingly clear. At the inaugural annual lecture at the University of Lausanne in 1989, when I was appointed professor, I devoted my paper to the subject of explanation in the social sciences and the problem of the relationship between the micro and the macro. I took this further in several other lectures and seminars at the Universities of Geneva, Rabat and elsewhere. As you rightly point out, it was from the mid-1990s that I started to publish more articles on these topics.

How does your book on "Invisible Codes" *relate to the international debates on social mechanisms and analytical sociology?*

The conception of generative mechanisms as a basis for explanation and a possible solution to the problem of the transition from the micro to the macro seemed to me at the time to be increasingly productive. I would draw your attention to the fact that there are two problems. As usual, I used and investigated history; and I drew upon contemporary theories. I pointed to the existence of a positivist tradition that refused the search for mechanisms. It goes back to Auguste Comte who explicitly called for an anathema on any search for "generative mechanisms", a phrase he had used in his *Course of Positive Philosophy*. It continues to this day. Curiously you will find it in the work of sociologists of the Columbia school around Lazarsfeld, among political scientists and in general in all macrological studies that focus on predicting the evolution of phenomena without necessarily worrying about the micrological foundations of macrology.

I have identified the founding fathers of explanation by mechanism such as Claude Bernard, followed later by some particle physicists of the early 1900s, still later linguists such as Chomsky. Sociologists have only really taken this route rather late in the day, with Boudon, Schelling, and Fararo for instance, although there were attempts by Durkheim, Weber and Tarde. Any explanation by generative mechanisms is necessarily demiurgical in the sense that *Theaetetus* intended. You can build purely macroscopic generating mechanisms. They are easily found in the work of several economists and sociologists. In sociology, for example, normative theories enable the movement from macro to micro; they can link the macro to the macro, but not the transition from micro to macro.

In fact, the discovery of the role of generative mechanisms preceded the solutions of the problem of movement from micro to macro and vice versa. To be convinced, just read the book by Hedström and Swedberg on *Social Mechanisms*.

Thus it was necessary to solve the two problems simultaneously. This is what, modestly, I tried to do in a clumsy way in my publications, and especially in *Invisible Codes* which is the conclusion to the earlier work. I also tried to deepen my thinking on the explanation of emergent phenomena in *Good Intentions* and *Crise de l'Université*.

The ambition of some colleagues to define sociology as analytical is not a problem for me. Is it, however, a new theory and a new approach? I do not think so, because the leaders of this orientation are merely continuing a strong tradition that has always regarded sociology as a scientific discipline.

The concept of methodological individualism is still controversial in sociology. Would you define yourself as a methodological individualist and, if so, in what sense?

In all scientific disciplines, controversies are desirable provided that we are not spending too much time on them. We are all individualistic methodologists at one time or another in our research work. We may cease to be when our means of investigation and explanation we impose limits on our creative imagination. Even the anti-individualist who believes only the effects of structures and conceives the individual as a dough, is required at a time of his work to stop believing this fiction. Durkheim noted somewhere that even the cat can tell the difference between a toy mouse and a live mouse as an animal endowed with a certain autonomy. The cat is not fooled. The eternal question of the programming of the human being will never cease to haunt us. It will still do so with the new cognitive sciences.

Do you feel that your epistemological standpoint leads to special resistance within French sociology?

Assuredly: I would only need to offer as proof the fact that some French researchers devote their time and energy to their wish to demolish methodological individualism. But let's be generous: the most demanding methodological individualist will violate certain rules of this epistemological orientation and take refuge in universals and reifications that even Weber had tried to fight throughout his intellectual life. In economics, you will find some fine passages about this in the articles of Carl Menger.

Things change over time; but it is difficult to get rid of certain intellectual reflexes.

MOROCCAN SOCIETY

It seems that your first published article on Morocco appeared in 1994. Was your interest in Morocco earlier than that?

I wrote that article on the occasion of a thesis about marriage in Morocco. In fact, I had already carried out some unpublished work on the effects of the structural adjustment policies that the International Monetary Fund had imposed on Morocco in the early 1980s. At the time, I took part in some projects. Among the oldest, I would count the thesis of my late friend Remy Leveau, who had in the mid-1970s asked for my assistance in his analysis of Moroccan electoral data.

Your published work on Morocco seems now more regular than before. Why?

You are right. Since 2003, after many requests from my Moroccan friends, I have increased my research concerned with Morocco and become more involved as an advisor to senior civil servants and political authorities. It was firstly the Senior Commissioner of the National Plan who invited me to prepare a conference on the future of Moroccan society in 2025. I had to write a long note on the subject that would be the plan and direction for conference. My geopolitical and sociological work on the Sahara was a response to questions that a dear friend had asked me and this took me a long time because I had to undertake very large scale field surveys which were extremely difficult to carry out. Then there was the major survey on teaching and research in the humanities and social sciences which lasted from 2005 to 2009, and was commissioned by an interministerial committee chaired by the Prime Minister. These are the reports that I wrote on trust in institutions and social bonds. My late friend Meziane-Belfqih, adviser to the king, asked me to carry out a major survey of the social bond for a new institute that he had established. This was the work that I published on the "Arab Spring". At the moment I am working on a major sociological synthesis on Morocco, for which I am using all the available data and surveys from the beginning of the twentieth century until today.

In truth, I have finished the first chapter of the book. The text is somewhat long since it almost contains 100 pages. I took this opportunity to ask numerous sociological questions about Islam and its amazing spread in societies where the faithful did not practice a lot. I compared about 40 Islamic and non-Islamic societies. I used all the national and international data on the subject including those of the *World Values Survey* and those of the Moroccan High Commission for Planning. I hope to include other data from other sources. I am frankly surprised that such important issues had not hitherto been seriously studied by sociologists of religion who are of course aware of these tidal waves. I use all possible assumptions, including those I had advanced in my *Good Intentions*, to offer some explanation. Inglehart and his colleagues have been obsessed with the relationship between Islam and democracy or gender equality in Islamic societies. They also wished to test the hypotheses about Huntington's clash of civilizations. They have not faced what seems to be the real issue.

What was your personal and institutional involvement in Moroccan academic and intellectual life during your career?

In one way or another, I have never stopped playing a part in the intellectual and institutional life of Morocco. My own family has had many religious, intellectual and political roles since at least the fifteenth century. Arriving from the East with the first waves of the Banu Hilal in the eleventh century, my family settled in the southern region of Morocco before moving to the central plains and founding religious centres of which the most important is Boujad. Its privileged relationship with the royal courts and with the Arab and Berber tribes had earned it a special status. Many of its members were ministers, ambassadors, counsellors, judges etc, but mostly intellectuals who have left behind many writings, and mystics, however, committed to alleviating the suffering of their protégés. A number of works in anthropology, history and political sociology have been devoted to it.

Whilst for my own part I decided to take up a career as a researcher in France rather than one as a senior civil servant or in Morocco's political life, I have never broken away from my Moroccan connections. And it has always been as a researcher that I have accepted occasional assignments whether in France, Morocco or elsewhere. In the mid 1980s, I agreed to write a report on the social consequences of structural adjustment policies in Morocco. I also agreed to provide a seminar at the University of Rabat from the mid-1980s when a group of students from the Royal College were studying for the Diploma in Advanced Studies. The seminar included a presentation of game theory and the application of models of this theory to the relations between Morocco and Algeria. Twenty years later, I returned to this early thinking and it would form part of my first study in geopolitics.

But it is has been since 2003 that my activities in Morocco have greatly intensified. My personal and family relationships led me to respond to some informal and official requests for advice and reports on various topics. I cannot mention them all, but here are some examples. I was appointed by His Majesty the King to be a member of the Royal Commission on Regionalization. I was given the rank of lifetime professor, and act as unpaid advisor to some of the institutions of civil society.

Sometimes I have declined requests where I found them unreasonable or doomed to failure. For example, about twenty years ago, I was approached by the Moroccan Prime Minister to be on the list of a group of persons who were proposing educational reform. I declined the offer because of the working conditions and the very large number of participants. I was right, of course, since the so-called reform has worsened the situation. A year ago I was again asked to be a member of a committee on reform of the education system. I explained publicly this time why I refused to take part. I thought, as I always think, that the mode of work and functioning of this committee means it was inevitably doomed to failure.

DIFFUSION OF KNOWLEDGE AND TEACHING

You devoted considerable energy to the diffusion of sociological knowledge through editing, and/or contributing to, dictionaries, encyclopedias, textbooks, and collections of texts. What was your motivation in undertaking such a great amount of editorial activity?

Anybody who has devoted some of their time to edit or write dictionaries or series of collective works knows that they are providing a service to the scientific community. Where I was concerned I thought that my research activities were too focused on my own goals and not enough on the dissemination of knowledge. You will be aware that my teaching at several universities was always quite limited and did not involve many students. In truth, I was always been put off by teaching except when it came to seminars where I could present my research and the results to which it had led.

Would you say that this has had a substantial impact on French sociology?

I hope so. In any case, if I judge by the number of editions and translations, the dictionaries, encyclopedias and anthologies may have been useful in the dissemination of knowledge in France and elsewhere. I am afraid that this has been more the case abroad than in France, where sociology has not yet acquired the status of a scientific discipline that has gone beyond petty politicking.

Apparently in contrast to your will to diffuse a certain kind of sociology through general and pedagogic writings, only rarely have you agreed to supervise PhD students. Why?

I am a little ashamed to admit that I have always refused to supervise theses. Throughout my career in France I had only one doctoral student: Gianluca Manzo. He began by preparing a thesis under my direction on Weber for his Diploma of Advanced Studies at the University of Paris IV Sorbonne. I had never read such a remarkable piece of work. When Manzo came to ask me to direct his doctoral thesis, I gladly accepted because I knew in advance that it would be a success. I was right. During the defence of his thesis, all the members of the jury warmly congratulated him for this exemplary work.

It is true however that I once agreed to supervise another student to please Boudon. I was sure that we would not get on. This proved to be the case.

In Morocco, I also agreed to supervise the preparation of the thesis of a friend, Bensouda, former director general of taxes and the current Treasurer General of the Kingdom, on the limited rationality of decisions about finance legislation and tax institutions in Morocco. Not being an expert in public finance, I learned more about what really directed the content of the thesis. However, I have never refused to advise dozens of doctoral students in various disciplines who know that my office and my house are always open to them.

WORK RECEPTION

Were you to perform the difficult task of retrospectively assessing your intellectual trajectory, who are the authors who you would say have influenced you the most?

Boudon was a master and a dear friend whose loss is unbearable to me. My debt to him is enormous. How can a man of his intelligence and modesty with whom I shared forty years of intellectual life, and who had agreed to read my writings and all of whose manuscripts I had read, with whom I had almost daily discussion on all and any subject, how could this not have had a profound influence on me?

I would also like to acknowledge my intellectual debt to other sociologists whom I never had occasion to meet such as Lazarsfeld, Simon, Fararo, Schelling, Peter Blau, Merton and Coleman.

Several of your books and articles have been translated into various languages. Are you be able to assess how your work was received in different countries?

I confess that I have not sought out all the reviews of my work or how many citations there have been of my articles. This flatters amour-propre; but to me it seems unimportant. Sometimes articles rejected by journals prove to be innovative. All I know is that every book I published has attracted the attention of some colleagues who have been kind enough to discuss them in journals or even in more general publications such as newspapers and weekly magazines. They have had the courtesy to send me copies. This covers France as well as the United States, England, Germany, Spain, Italy, Japan, Portugal, Peru, Chile and Morocco. I do not know the fate of my writings in other countries.

Apart from rare successes, I do not believe that a researcher is able to produce revolutionary results. We contribute at most to the construction of our "common household". So we should not expect to be hailed as a genius every time we publish an article or book. Let's be modest.

Are there any debates raised by your work outside France that you consider especially important?

The previous answer gives you my opinion on the subject. But it is true that when the book is about a subject that has obvious political implications, it causes heated and passionate debate. This is the case of my writings on education systems, political institutions, and geopolitics. This meant I became *persona non grata* in one country but gained public recognition. But in this case we touch on human passion.

Which book or research article do you regard as your best, and why?

It is difficult for me to answer your question. I think it is others who are better able to give you an answer. You know that the itinerary of a researcher is neither linear nor smooth. His publications are only steps from a thought that unfolds gradually, sightings in an ocean over which he sails and attempts to cross although he cannot see the distant shore. The researcher capitalises on some publications before producing others that may be superior in quality. The least original article however, may contain, buried within it, a very successful idea that could enlighten us on a class of phenomena but which will be taken up by someone else entirely.

Thus, we guess that, should we ask you to identify your main contribution to sociological theory and epistemology, you would refrain from replying?

It would be pretentious of me to do so. It belongs to my peers to say what it might be. Maybe I have not accomplished anything important.

However, I hope that my modest work will be useful to others, that it has made a contribution to the common enterprise.

Can you at least tell us if there is anything you would not rewrite or change substantially?

My answer to your previous questions leaves no doubt as to my position. Everything can be rewritten; nothing is absolutely intangible, sacred. But one should not deny anything; everything must be taken as it is.

INSTITUTIONAL LIFE

To conclude this interview, let us move on to a set of questions concerning your institutional activities in France and abroad. In this respect, could you start by describing your experience as member, and then, director of GEMASS?

Boudon was first of all asked to lead the Centre for Sociological Studies (CES: *Centre d'Etudes Sociologiques*), the largest research unit of CNRS sociology. In 1968-9, some events that took place at CES irritated him. They were caused by leftists who probably thought that France was entering a revolutionary era and that we had to break with all authority, be free from coercion, in short, to live in a gentle anarchy. He left the CSE and created GEMAS in the early 1970s and led it until the eve of his retirement. In 1998, he asked me to succeed him. Which is what I did after a unanimous vote of the members. As the name suggests, GEMAS was a research unit devoted to quantitative methods and a wide range of sociological and political studies. It was noted for the excellence of the publications of its members. From the late 1980s, Boudon engaged increasingly in work related to epistemology and philosophy. This approach had an effect on the recruitment of new members who came from a background in philosophy.

As soon as I could take on the leadership of the GEMAS, I redirected the group towards quantitative sociology. All new recruitment was going in that direction. It was not too difficult: the candidates had excellent records; my position at the CNRS enabled me to effectively support them and the leadership of the CNRS strongly supported me. To disseminate the research of GEMAS members internationally, I created a series of books in English with the support of my friend and accomplice Peter Hamilton without whom nothing would have been possible. We opened up this series to other highly original publications. I think we could have done more if we had had more financial support.

Boudon also asked me to take over from him at the Sorbonne as a Professor. For strictly personal reasons, I could not take on this burden. He was sorry but in the end he understood my decision. I knew that my decision would have consequences for GEMAS and the teaching of sociology at the Sorbonne. I was not mistaken.

What will be the future of GEMASS? It will largely depend on the commitment of its director, his willingness to sacrifice some of his time to the community, of his network of relationships that can be used to recruit new researchers, to be able to knock on the doors of the political and administrative leaders of research in France, to not be afraid to recruit brilliant foreign researchers, etc. The GEMAS now includes talented researchers; some are less so—alas. It is essential to strengthen this potential.

You devoted a considerable amount of energy to the sociology section of the national scientific committee of the CNRS. Could you describe your activities and what you learned from this experience concerning the organization of French sociology?

I had agreed to serve in the sociology section of the National Committee of the CNRS for ten years. The work involves assessing nominations to the CNRS, and those of researchers who apply for a promotion, to grade the CNRS research units either to support the best or to eliminate the worst and create others. The committee also evaluates the scientific journals financially supported by the CNRS and allocates a budget between symposia sponsored by the institution and other work related to the organization.

Belonging to the National Committee can contribute to the defence of excellence. This is not however always the case. But with patience, diplomacy and compromise, we arrive at good results. That is why it is vital to accept this responsibility and not to leave it to the members of cliques and cults. I will be discreet and not mention the names of certain cliques which are formidable, capable of the darkest plots to help their zealots at the expense of scholars with excellent records, and hence sacrifice our scientific discipline on the altar of defence of the clan. These cynics do not believe in the search for truth but only power and exclusively power struggles. They thus support Callicles and Pontius Pilate against Socrates and Christ.

You have been a member, then, director of the Revue Française de Sociologie. *Could you describe the main historical evolutions of this journal, its impact on French sociology as well as your own personal view on, and experience with, this central scientific institution?*

In the early 1980s, members of the editorial board of the *Revue Française de Sociologie* had paid me the honour of recruiting me as one of their number. Our meetings were held as often as necessary to discuss all the manuscripts that we were all supposed to have read. Without exception, all members were present at the meetings that ended with a lunch in a restaurant. Despite our different intellectual backgrounds, our relations were very cordial. We shared the work equally without difference in status. To fulfill our commitments vis-à-vis our readers and subscribers who expected that we would publish five issues per annum, we launched the idea of publishing a special issue per year. It was much later that we had the idea of translating the best articles of the year which would be published in a special issue in English.

The RFS was undoubtedly the showcase of French sociology, insofar as the journals of narrow interest groups of did not yet exist. It played a decisive role in the recruitment and promotion of sociologists at the CNRS and in the universities. Over the years, members of the RFS editorial board changed. By consensus, we recruited new members. Tradition was certainly perpetuated; but some recruitments turned out very evidently to be bad ones.

When, after the death of Philippe Besnard who was then heading the RFS, some former directors of the RFS strongly supported by the secretariat had asked me to head the RFS, I agreed on the condition that I would do it for three years. I knew that some members of the Editorial Board, unfulfilled careerists, wolves with long teeth, that I had however strongly supported to be elected to the Editorial Committee, were sickened by my application and my election. I was expecting the worst from them.

Thanks to my excellent relationship with the management of the CNRS, I obtained many advantages for the RFS. I had plans to open the journal up to an international audience. I had first discussed this with the directors of the CNRS which was quite willing to help us in terms of personnel and financial resources. I had thus obtained the exceptional renewal of a second post for the editorial section while all the other journals were seeing their personnel melt away like snow in the sun. The CNRS committed to increasing the budget allocated to us so that we could publish every year a book taken from the exceptionally rich archives of the RFS. I had almost convinced a British publisher to be our partner in this adventure. I presented the project to the Editorial Board naively thinking that it would be accepted with only minor changes. I also knew that I would not derive any personal benefit of any kind from the realization of such a project, since I had already given up the editorship of the RFS at the end of my term as I did not want to renew it. But as sometimes happens in scientific organizations that operate on misunderstood and sometimes misguided liberal principles, some fools had almost accused me of some indescribable plot. Was it because of ignorance or personal and treacherous calculation? This is vile and pathetic. I was delighted to see that this idea is now being used by a prestigious journal—the *Harvard Business Review*. From that point on, I was only waiting until the end of my term to exit the journal.

You have been on the board of several international scientific journals as well as an elected member of important scientific academies. On the basis of this experience, what view did you develop about the differences that exist, if any, between French sociology and the international sociological community?

My presence on the editorial boards of several international journals was very instructive for me. It was an opportunity for me to ask several francophone researchers to submit their manuscripts so that they could make themselves known internationally. Moreover, the manuscripts of analyses and reviews submitted to these magazines were not a problem unlike the case in the French journals. Several reasons explain this difference. First, the number of francophone researchers and academics who agree to submit manuscripts to journals is too limited in contrast to the English-language journals. Second, it is only recently that promotion began to reflect the publication of articles. Third, the limited market of French sociology and the functioning of the institutions paradoxically promote cults and clans outside of which there is no salvation. Fourth, this trend led to the creation of journals linked to particular schools which is detrimental to research journals. Fifth, our French colleagues do not have the Anglo-Saxon and Germanic cultures for which criticism—even where harsh—is a spur to improvement, not an ad hominem attack. Sixth, monolingualism, the lack of openness to other countries, the plethora of journals narrowly based on schools and cliques, the tardy hierarchisation of journals which alone would have made it possible to distinguish between the status of articles, contribute in France to incestuous relationships from which one can easily predict that they would have negative consequences on sociological output.

Scientific academies who have paid me the honour of counting myself among their members offer unique opportunities to meet colleagues from other disciplines and to interact with them. One needs to be equipped enough to understand a little of their intellectual interests and problems and to sensitize them to our own. I learned a lot from the historians, archaeologists, physicists, and mathematicians who have had the courtesy to ask me about my research and tell me about solutions to similar problems in their discipline or suggest readings. Here are some examples. At a reception, a historian of religions colleague had strongly urged me to read a series of books on monotheism that informed my reading of Weber's writings on sociology of religion. Another mathematician colleague helped me solve a problem of estimating the parameters of a function that I had stumbled over for weeks. Physicists did not find uninteresting some remarks that I made about the solutions that sociologists had brought to the problem of levels of reality, the aggregation of individual behaviour either as emergent macrophenomena or in the form of resulting phenomena.

You have experience of several international think-thanks. Could you tell us more about this aspect of your professional activities and your view about the relation between research and politics?

I only started going to these international think tanks when I directed some of my research towards geopolitical issues. I admit that at the meetings of these circles, one learns so much more in a few days than if one attended annual seminars or if one read several books that cover various topics.

In addition to the lectures usually given by external invited guests, our annual or semi-annual meetings are opportunities to meet and discuss with the political, military and economic leaders of many countries. We freely exchange remarks. This would not have been the case in other contexts.

The lectures sometimes show us the work of academics and political and economic advisers that we would not have known how to find on our own. I had the pleasure of listening to such brilliant personalities as Brezinski, advisers to Putin, Bush father and son, the leaders of several countries, former British prime ministers, central bankers, members of the Supreme court of the United States, Chiefs of Staff of armies, bosses of multinationals, etc. The list is too long. It is amusing to note that these tormented eminences would be beautiful subjects for psychological analysis.

You would be surprised to learn that politicians often make decisions by ignoring the recommendations of experts, including academics. One day I asked a prominent professor from a prestigious British university about the danger of the commitment of the UK alongside the United States in the second Iraq war, despite some British experts knowing the area well. He explained to me that Tony Blair had indeed invited them to go and see him at 10 Downing Street. But at the moment when our colleagues were informing him on the situation in Iraq and the quite predictable consequences of military intervention, the Prime Minister looked out the window. Clearly, his mind was made up well before their presentations. Of course, this story should not be generalized; but it is symptomatic of the relationship between politicians and academics unless the latter are ideologues espousing political theories consistent with dogma.

Over the past decade, in addition to my purely sociological research, I devoted several works to geopolitical problems and especially to this area I call the "crisis ellipse" that runs from the Atlantic to the Indus, which includes all Arab countries, the Sahel, the Near and Middle East, Turkey, Iran, the and the former Muslim republics in Asia. This geopolitical region has a distant relationship with the somewhat religious one in Huntington's *Clash of Civilizations* or the mythological configuration of the world of American neoconservatives, of which I do not share the diagnosis and even less their plans, although some of their insights deserve our attention once they have been separated from their messianic ideology. I confess to being a reader of the works published by the *American Enterprise Institute* and other think tanks which are numerous in Washington, works that are not limited to geopolitics but also cover urban problems, education, crime, democracy, etc.

Besides lectures that I have given on these issues in several countries and institutions, I started to publish material on the project of the Union for the Mediterranean, and the Arab Spring - which has only been the subject of journalistic articles apart from two attempts at explanation which are based on macro-data - and its foreseeable consequences on the Sahel, etc.

In the coming years or decades, and without necessarily being a soothsayer, one can bet on the emergence of new alliances and coalitions in the world. We enter a new era that, because of a lack of generosity, of myopia and through misunderstood interests, some European, Russian, Arab, and other leaders do not understand or do not want to see, it seems. The large blocs, which will each have a demographic weight of around one billion, will lead the world economy. Even the United States, which has already lost its place as economic leader in favour of China, will solve the problem by partnering itself with some of its neighbours, including Mexico. All this will have consequences for politics and especially democracy as we understand it, but which it will be necessary to reinvent.

It is a pity that sociologists do not invest more in this area of research that remains theoretically underdeveloped.