



## Science as vocation? Discipline, profession and impressionistic sociology

### La science est-elle un métier ? Discipline, profession et sociologie impressionniste

**Michel Dubois**

Université Paris Sorbonne, GEMASS/CNRS

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Discipline, profession, science, sociology, vocation.

#### MOTS CLÉS

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#### ABSTRACT

*Although key categories in sociology since Max Weber, "profession" and "discipline" are often used in a superficial manner, without any rigorous definitions. This article provides examples of impressionistic approaches of those two notions by analyzing studies on the socialisation process in the world of science. Building from E. Freidson (1970 [1984]), Y. Gingras (1991) and R. Stichweh's (1992) general line of arguments, I propose three main reasons to justify the need to consider "discipline" and "profession" as two distinct phenomena that the sociologist should study from the perspective of their interaction, but also of their transformation.*

#### RÉSUMÉ

*Bien que les catégories de « profession » et de « discipline » occupent une place centrale en sociologie depuis Max Weber, elles sont souvent utilisées de façon imprécise, sans être rigoureusement définies. Cet article fournit des exemples d'approches impressionnistes de ces notions en s'appuyant sur l'étude du processus de socialisation dans le monde scientifique. En se fondant sur les travaux d'E. Freidson (1970 [1984]), de Y. Gingras (1991) et de R. Stichweh (1992), j'avance trois raisons principales qui justifient le besoin de considérer « discipline » et « profession » comme deux entités distinctes que le sociologue devrait étudier du point de vue de leurs interactions ainsi que de leur transformation.*

“Discipline” and “profession” are two basic categories for describing contemporary societies. Nowadays, most of our social achievements are interpreted as part of professional frameworks. Moreover, the division of labour between professional groups constitutes a pivotal social feature and a major source of social inequalities. Discipline, on the other hand, is generally construed as the basis of expert knowledge on which professional groups heavily rely. The medical profession, which has frequently been studied by sociologists (Merton *et al.* 1957; Freidson 1984 [1970]), is a case in point. Seen from a wider perspective, disciplines constitute a transnational institutional infrastructure that tends to produce dividing lines between legitimate knowledge and illegitimate knowledge.

Sociological literature on the categories of “discipline” and “profession” is abundant.<sup>1</sup> As suggested by the title of this article, I discuss this literature through a specific case: science as an occupation. The reasons for this choice are, at least, twofold. First, one of the core objectives of the sociology of science (since its inception) has obviously been to study the many aspects of the “disciplinary regime” of knowledge production (Shinn & Joerges 2002). Disciplines are frequently not only perceived as a primary frame of reference in scholarship and science (Heilbron 2004a), they are also construed by sociologists as “empirical strategic sites” (Merton & Thacray 1972; Lemaine *et al.* 1977; Heilbron 2004b; Dubois 2014a, 2014b). Secondly, as F. Champy indicated (2009), one of the first contributions to the sociological study of professions has been precisely devoted to the scientific and/or academic occupation. On the occasion of his lecture *Wissenschaft als Beruf*, delivered on November 7, 1917, Max Weber, the German founder of sociology, chose a term—“*Beruf*”—that means “profession” but that is also endowed with a religious dimension as it also refers to science as a “calling” (Weber 2004 [1919]).

Besides its great intrinsic value, Weber’s lecture shows that it is difficult to clearly distinguish between the professional and the disciplinary dimensions of science. The dual structure of the lecture seems to acknowledge the existence of a strong demarcation between the two categories. The first part of the lecture focuses on the “external organization of science” (*Beruf* as *profession*) through a comparative analysis of the scientific *careers* in Germany and the United States, whereas the second part is centred on the values that are needed (*Beruf* as *calling*) to unconditionally embrace the disciplinary organization of scientific practices: “[...] the inner vocation of science [...] is determined in the first instance by the fact that science has entered a stage of specialization that has no precedent and that will continue for all time” (*ibidem*: 7).

However, as clear as that distinction might seem at the beginning of the lecture, it is rapidly discarded by Weber. His analysis of scientific values is recast in

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<sup>1</sup> The recent second edition of *the International Encyclopedia of the Social & Behavioral Sciences* (Wright 2015) for example, presents no less than four entries for “discipline” and seven entries for “profession”: Discipline-Building in the Social Sciences; Collective Memory, Biography and Autobiography; Development and Current Status of the Discipline of Criminology; Discipline Formation in the Social Sciences; Professions and Professionalization, History of; Social Science Professions and Professionalization; Lawyers: Social Organization of the Profession; Medical Profession; Professions in Organizations; Teaching as a Profession: United States; Professions, Sociology of.

professional terms: “what is the inner attitude of the scientist himself to his profession? [...]” (*ibid.*: 12); “Science today is a profession practiced in specialist disciplines [...]” (*ibid.*: 27). The discipline is conceptualized as *cognitive dynamics* (a growing specialization of knowledge) but also as a *delimited institutional space* devoted to scholars sharing the same professional value(s). And there are obviously many good reasons to retrospectively consider Weber’s lecture as a first landmark in the sociological study of the deontology of science.

Although sociologists of science, almost one century later, have generally forgotten the Weberian notion of “*Beruf*”, they nonetheless adopt the same impressionistic outlook on the categories of “profession” and “discipline”. The objective of the first section of this article is to briefly illustrate this interpretative pitfall with a few examples drawn from the sociological literature devoted to the socialization process in science. For the purposes of this article, I have limited my discussion to this specific literature and have not explored whether this impressionistic approach is widespread or not in the contemporary sociology of science, or even more widely in general sociology.

The second section of the article aims to address some key conceptual and definitional elements in order to clarify the two categories and, more broadly, the nature of their mutual relations. Building on E. Freidson’s (1970 [1984]), Y. Gingras’ (1991) and Stichweh’s (1992) general lines of arguments, I suggest that “profession” and “discipline” correspond to two distinct phenomena that should not be confused without sufficient conceptual care. In a brief conclusion, I will discuss how an already well-documented trend in the dynamics of science and technology may have important consequences for the balance between these two categories in the sociological analysis of science.

## 1. Lessons from socialization studies

Nowadays, scientific research is “naturally” viewed as a full time occupation. Approximately seven million people daily engage in countless research and development (R&D) activities around the world.<sup>2</sup> This situation is of course dramatically different from the one observed one century ago, in the 19th century and before. At that time, not only was scientific research still practiced on a limited demographical scale, but science was not the main occupation of early practitioners of science. Historians of science have described the German origin of this transformation (McLeeland 1991) but also questioned the illusory simplicity of the notion of “professionalization” commonly used to describe this transformation (MacLeod 1972; Porter 1978; Goldstein 1984; Broman 1995; Golinski 1998; Barton 2003).

Following Weber’s focus on the basic values of science, the first American sociologists of science proposed to define the scientific community as a

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<sup>2</sup> For more details about the volume and distribution of these activities, see the annual science and engineering reports from national and international organizations such as the NSF <<http://www.nsf.gov/statistics/2016/nsb20161/#/report>>, UNESCO <<http://www.uis.unesco.org/ScienceTechnology/Pages/default.aspx>> or OECD <<http://www.oecd.org/sti/msti.htm>>.