

**THE ROLE OF PRACTICES IN INSTITUTIONAL  
CHANGE THE EVOLUTION OF DOCTORAL  
PROGRAMS IN FRANCE 1990 – 2008**

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THE ROLE OF PRACTICES IN INSTITUTIONAL  
CHANGE

THE EVOLUTION OF DOCTORAL PROGRAMS IN  
FRANCE 1990 – 2008

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### *Abstract*

*Whether based on the figure of institutional entrepreneur or the dynamic of social movements, models of institutional change have yet to solve the paradox of embedded agency. Studying institutional change from the angle of practices allows introducing a channel by which seeds of change enter the field without modifying logics at first. Political entrepreneurship or grassroots initiative will play a critical role in institutional change as long as they can rely on existing practices. Evolution of conditions to perform day to day activities introduces new problems; solutions trigger the development of new activities. Routinization of new activities leads the emergence of new practices. Non-adoption of practices hinders institutional change. Practices thus inspire, support and limit institutional change. Basing our observations from a case study of the French Doctorate defined as an institution, shifting from research and study to professionalizing diploma, we build a process model of institutional change integrating the dynamic of practices.*

## INTRODUCTION

Environmental pressures such as law (Holm 1995) and technology (Oliver 1992; Barley 1996), social movements (Seo and Creed 2002; Rao, Durand et al. 2003) and institutional entrepreneurship (Maguire, Hardy et al. 2004; Greenwood and Suddaby 2006) have been mobilized to understand mechanisms leading to institutional change. While the role of agents and agency is critical, the problem of embedded agency has yet to be solved. Observing institutional change through the angle of practices can allow us to solve this problem. What is the role of practices in institutional change? How does the introduction of practices in a process model of institutional change can help refine our understanding of the phenomenon? These are the questions at the core of this paper.

Through more or less materialistic arrangements, institutions embody the shared meanings “that makes social life meaningful and predictable” (Hargrave and A.Van\_de\_Ven 2006). These meanings have the peculiarity to come across as natural and therefore be taken for granted. Although socially constructed (Berger and Luckmann 1967), they acquire a “reality-

like status” (Zilber 2002). By the same paradox that they are at the same time “real” and “socially constructed”, institutions are also at the same time resilient and shifting. Therefore, challenges posed by institutional change – how does a taken-for-granted state of things shift to another – echoes the issues raised by institutions themselves: How do socially constructed meanings, scripts and sense-making frames become taken-for-granted? During the process known as institutionalization, what started as humanly designed schemes acquires a transcendent property. Conversely, during in institutional change, a previously taken-for-granted, “natural” feature of social life is being altered, abandoned and replaced by another.

Following Campbell (2004), we define institutional change as the modification affecting an institutional field in its main dimensions, over a defined period of time. One basic assumption of institutional theory is that organizations are located within fields (Kondra and Hinings 1998). A field – whether referred to by institutional literature as organizational or institutional – designates an area of social life gathering organizations and professions, engaged in a similar social function (education, health, finance...) that share the definitions of an activity or a social device: “The notion of field connotes the existence of a community of organizations that partakes of a common meaning system and whose participants interact more frequently and fatefully with one another than with actors outside of the field.’ (Scott 1995).

Fields are characterized by institutional logics. Logics “define the norms, values and beliefs that structure the cognition of actors in organizations and provide a collective understanding of how strategic interests and decisions are formulated. (DiMaggio 1997; Jackall 1988)” (Thornton 2002). There can be several competing logics within one field (Holm 1995; Thornton 2002; Rao, Durand et al. 2003). Institutional change affects the whole frame that

individuals previously relied on in order to make sense of their environment, and relate elements of social life to one another.

Such a change, affecting profoundly anchored features of social life, cannot be the result of one event, factor or dynamic. Is change radical or incremental? Does it come from the agent or the structure? These debates are a matter of angle rather than a choice that should be made between the two alternatives. Greenwood and Hinings (1996) underline that micro level studies tend to highlight incremental change, while macro level survey make radical change stand out. Similarly, while the study of institutional entrepreneurship and social movements tend to shed lights on the role of agents, the approach through the evolution of practices might allow a better understanding of what is being played at the level of the structure and more precisely at the interface between agent and structure.

We define practices as legitimized ways of performing an activity across an institutional field. They evolve along environment, material pressures insofar as actors, gathered in community of practices, are geared to “get the job done” (Wenger 1998). The evolution of the field (environment, laws, technology) creates an evolution of practices, which in turn feed institutional change. Actors do have strategic behaviours but they act along transcendent institutional logics. Hence the paradox of embedded agency (Seo and Creed 2002; Leca and Naccache 2006) that must be overcome to fully understand the process. We argue that practices allow understanding the missing link between strategic action and impact on institutional logics.

We propose to look at institutions as a set of discrete legitimized practices [we may need some references to usual definitions to assess the extent to which it is coherent, compatible, different]. Diversification of profession and members, in contact with various neighbouring fields, brings in new practices carrying outside logics. Growing variance in legitimacy among

practices will make one of them stand out, fostering top-down and/or grassroots initiative for change (through institutional entrepreneurship or social movements). Adoption of promoted practices, even incomplete, imperfect or ceremonial will in turn modify members' perceptions, experiences and beliefs, hence institutions. Non adoption will turn members into deviants exiting the field and modifying the latter's boundaries and rules of membership.

Empirically, we study the evolution of doctoral education in France between the nineteen-nineties and today, going from an apprenticeship to a more structured training model.

Presentation of the outlines of the paper

## LITERATURE REVIEW

### *Institutional change as a dialectic process feeding on institutional heterogeneity*

Institutional change is a critical issue in neo-institutional literature: the emphasis on the permanence of institutions and the pressure they exert on agents seemed insufficient to account for the richness and complexity of social and organizational life. On the other hand, "in highly institutionalized environments, institutional change comes across as a contradiction" (Scott 2001). Tackling the issue of change with the lenses of neo-institutionalist literature leads to wonder how taken-for granted elements of social life loose this property, become questioned and replaced by other elements that would have been illegitimate, unthinkable or impossible beforehand.

The study of change by neo-institutionalists is mainly oriented towards studying the role of agency (DiMaggio 1988; Hardy et al. 2004; Greenwood and Suddaby 2006) (DiMaggio 1988; McGuire, Hardy et al. 2004; Greenwood and Suddaby 2006). The critical role of powerful

actors, called institutional entrepreneurs, in the framing of a problem, the building of rhetoric, and the enrolment of allies in a change initiative, thus fostering profound social change is well documented and known. However, actors remain embedded in the institutional field they are contributing to change, leading scholars to formulate the paradox of “embedded agency” (Seo and Creed 2002). Therefore, “to remain coherent with institutional theory, a model of institutional entrepreneurship must provide a model of change in which actors can create and change institutions without disembedding from the social world” (Leca and Naccache, 2006)

In that respect, literature on social movements provides a convincing account of the origin and mechanisms of institutional change, including in the scope of the study collective action emerging in a given historical and political context (Clemens 1993; Schneiberg and Soule 2005; Bartley 2007) + Hargrave and Van de Ven 2006

The notion of “institutional work” developed by Lawrence and Suddaby (2006) consisting of fourteen possible activities “creating, maintaining and disrupting institutions”, introduces more complexity in the analysis of agency in institutional change. The emphasis is not so much on the role of agents initiating change, but on their performing of a more diluted and fragmented kind of institutional work. This nuances the heroic dimension of the institutional entrepreneur, often criticized for this reason.

However, what seems the most promising angle to understand change at the institutional level is the deconstruction of the institution as a whole. First, institution is heterogeneous in itself, containing competing logics (Seo and Creed 2002). Thus, DiMaggio (1991) writes that “institutionalization bears, if not the seeds of its own destruction, at least opening for substantial change” (p.287). Other scholars stress this vision of change as an iterative, ongoing process, sometimes the product of a dialectical interplay between several antagonistic elements. Holm (1995) studies institutions as *nested systems*, which allows him to concentrate

on “endogenous rather than exogenous forces in explaining institutional change” (p. 401). In fact, Holm writes that “neither underlying power structures nor overarching ideologies are the primary explanations. The core institutional insight is that of interaction between practices, interests, and ideas.” (p. 416)..

While institutions are heterogeneous because of coexisting competing logics, the second source of complexity is that they operate at more than one level in the unfolding of social life. At a higher level float institutional logics. They set the principles of the game (Leca and Naccache 2006), while institutions themselves set the rules of the game. Organizations, formal structures, practices and actors belong to lower levels of social life, where “more active struggles over meanings and resources” happen (Lounsbury, Ventresca et al. 2003). To understand institutional change, we need to understand how institutional logics operating as transcendent can possibly be affected by what is going on at a lower level, such as the actions of individuals, groups or organizations.

The heterogeneity of institutions thus encourages looking at institutional change as a dialectic process between levels, in which we argue that practices play a critical role.

### ***Practices as carriers of institutional logics***

Quoting Lounsbury (2008) “practice refers to activity patterns across actors that are infused with broader meaning and provide tools for ordering social life and activity. They provide order and meaning to a set of otherwise banal activities”. Therefore, practices are infused with legitimacy (Suchman 1995). They also have a pragmatic dimension and are crafted in order to “get a job done” (Wenger 1998).

Several works study institutional change focusing on the interweaving of higher institutional logics and practices. Rao and Durand (2003) study the evolution of French cuisine over time,



from food dressed up in complicated pies and sophisticated sauces, thus highlighting a resemblance with architecture, to the simplicity and nakedness of briefly cooked ingredients promoted by Nouvelle Cuisine, referring to the art of painting. They show how these sets of practices match with higher orders of societal logics. Tuschke and Sanders depict the adoption of the contested practice of payment by stock options in Germany (Sanders and Tuschke 2007), while Lounsbury (2007) studies how mutual funds went from once legitimate practices seeking conservative positions, to the delegitimation of the latter and the legitimization of “active” type of mutual fund management, seeking to make more money. Finally, Zilber (2002) examines the evolution of practices in a rape crisis center, revealing the progressive delegitimization of the feminist frame of reference, in favor of a more professional, medical one.

Since practices evolution is related to that of material and cultural conditions, rather than the expression of an institutional change initiative, their introduction into the neo-institutional frame might help better understand the contradiction of change in highly institutionalized organizations, and the paradox of embedded agency.

### ***Research question***

This paper examines the role of practices in institutional change. We propose to look at institutions as a set of discrete practices and to view institutional change as a process of legitimization/de legitimization of practices.

The institutional change under review is the evolution of institution field (to be coherent with the definition) related to doctoral education in France between 1990 and today. In the remaining of the paper, we review the historical and political context in which the reform of doctoral education has been conducted in France since 1992, characterize the change under

review, present the data collected, and draw on the results of our analysis to propose a model of institutional change integrating the dynamic of practices.

## CASE STUDY

### *The evolution of PhD supervision in France, 1992-2008: Steps 1, 2, 3*

#### *Why and how this evolution is an institutional change*

The institution under review is the Doctorate, as a device regulating the entrance in the academic field and in the research profession.

After this overview of the Doctorate over two centuries and the recent evolutions, institutional change is visible through the variation in some essential dimensions of this social object.

1. Doctorate is now defined primarily as “training” and professional experience and not as “research” and “studying” anymore. The status of the dissertation has shifted; it is a mean of training and not a goal of the process anymore → PROFESSIONALIZING
2. Supervision is now embedded and structured into a formal organization (doctoral school). This introduces scrutiny → SCRUTINY
3. Supervision is now seen as a productive activity, implying investment and return on investment. This means commensurability across disciplines. A Doctorate in History is treated as a Doctorate in Physics; as a result, disciplines lose some of their specificity as a pillar for professional identity → COMMENSURABILITY

## **Professionalizing**

The doctorate was always understood as a process of professionalizing, that is, socialization to and insertion in a professional milieu. However, this was primarily understood as socialization to the teaching and research professions, primarily academic, secondarily industrial. No matter the final destination of the graduates on the job market (academy or industry), the professional ethos transmitted during supervision was the academic ethos. The evolution of the vocabulary in legislative texts suggests a shift in this initial, taken-for-granted meaning of the Doctorate. This Doctorate's definition evolves from meaning "studies" leading to the profession of researcher, to meaning "training" where research happens to be the means, leading to the profession of research *and* innovation.

1984: "third cycle is a training FOR research THROUGH research" (research is first a goal then a mean; already idea of professionalizing)

1998: "doctoral studies are a training FOR and THROUGH research" (research is both a goal and a mean)

2002: idem

2006: « doctoral training is organized within doctoral schools. It is a training THROUGH research, FOR research and innovation [...]. It constitutes a professional experience of research [...]. (research is first a mean of training, then the goal. The professionalizing dimension of the Doctorate is made explicit).

The ultimate goal (social output) of the Doctorate has shifted from knowledge production to training knowledge producers. The target of the process is not the dissertation, but the candidate. The social output of doctoral "training" is a professional able to do "research and innovation".

In parallel, the status of the dissertation evolves. It used to be the core of the Doctorate (in fact, the two terms are almost synonymous in the French common language). The dissertation is now evolving towards a representation (and practices) where it is an exercise to demonstrate ability to research, and a part of a larger process in which the focus is put on professional socialization through the building of a network, publications, participation in conferences etc...

In the 1840 text, the dissertation is expected “to honor the University and to be useful for the course of science”. By contrast, more recent texts put the professionalizing dimension in focus. Moreover, professionalizing refers to a larger sector than research: innovation. It suggests applied research, useful, bringing not only “honor” but an economic value.

Professionalizing and innovation are not *new* in the representations related to the Doctorate; but the emphasis put on these aspects is new.

This evolution is part of a larger dynamic of French Universities in general since the 1980's. In 1981, the first left-wing government since 1958 is elected in France. A wide consultation is launched among actors in the institutional field of education at all levels. The main concerns at the time are the democratization of the governing bodies within the University, and the professionalizing of university diplomas. University is then casually referred to as the “unemployment factory” “ou “unemployed factory”[“usine à chômeurs”] as opposed to the Grandes Ecoles, praised for guarantying their graduates a job (through internships, alumni network, early contacts with enterprises, junior enterprises etc...). Professionalizing then means to be able to find a job with a given diploma; organizing studies along economic sectors, job market destination, types of jobs, rather than disciplines. Professionalizing is all the more a concern that over the same period, France is also experiencing, as a consequence to the end of the “thirty glorious years” (or “*post-war expansion period*”) a level of

unemployment unknown since WWII (1981: 2m unemployed, 7.5% of the working population). The same reasoning is applied to the Doctorate as early as 1984: it must lead to a job. This argument gains audience and presence in the texts later on. Hence the emphasis put on “training” rather than “studying” or research.

## **Scrutiny**

Scrutiny means that it is legitimate for someone to look at and assess the relevance and quality of someone else’s activity. As the process of supervision gets structured and embedded into the formal organization of doctoral schools, scrutiny is introduced. Before doctoral schools existed, supervision was a process unfolding between two individuals outside any public scrutiny. Built on the model of medieval apprenticeship, the process implies that the master is almighty and excludes any questioning of the latter’s activity. Supervision is not identified as an autonomous activity; it is part of being an academic. Not being identified, the question of competencies, quality and results cannot be asked. By contrast, the building of an organization around this activity makes it de facto a collective object that must be defined and agreed upon across a wider community than before. What is supervision? What should it be? Who should control for this quality? How to define this “quality”? How, and what to do about it? Who has the legitimacy to do it? Organizing supervision will require that academics tackle all these questions. Supervision comes out into the light, becomes the object of collective, explicit norms, whether they are enforced or not.

Doctoral schools made mandatory in 2006 possess all the features of a bureaucracy in the sense of Weber: Organizational chart, hierarchy, repartition of tasks. They also have the features of a formal structure along Meyer and Rowan’s terms (Meyer and Rowan 1977): organizational chart, blue print... and some features of an organization along the definition of Brunsson and Sahlin-Andersson (Brunsson and Sahlin-Andersson 2000): identity, boundaries,

rules of membership, resources. Therefore, they frame supervision within formal rules. They draw a boundary around a population that now must follow the same rules, collectively defined by the scientific and pedagogic council. Entrance into the school and defence are submitted to the approval of the DS's head, upon discussion with the council. Defence is sometimes dependent on the fact that the candidate has followed a given number of training classes, has published etc... DS allows scrutiny and scrutiny allows the introduction of common rules across disciplines. The supervision is not under the sole responsibility and power of the "infallible" master anymore, but is a collective responsibility and must follow shared explicit rules. Signals of quality becomes more formal and impersonal (shifting from charismatic to legal-rational legitimacy). We do not presume of the enforcing power of the procedure. Opposing a registration can be more costly in terms of conflict than accepting them all. The "scrutiny" exerted by the council can be ceremonial. However, the legal procedure draws on a principle of scrutiny. It is there for actors to seize it.

### **Commensurability**

Commensurability is the fact for an object or an activity to be represented by/translated into quantitative data and therefore made comparable to other quantities (Nelson and Espeland 1988). Commensurability paves the path for comparison, ranking and "rational" choice in the economic sense. Individuals and notably professionals tend to struggle in order to make their activity incommensurable, and develop arguments to support incommensurability. At stake is their autonomy, freedom, power in the regulation of their activity. They thus try to escape the cold rationality and indisputability implied by quantitative symbols/data. The first sign that Doctorates across disciplines loose their specificity is the 1984 reform, with one single text of law for Doctorates of all disciplines. So far, each discipline – Humanities, Law, Sciences, Pharmacy – had their own set of laws. Formal norms were understood as different, and (the

fact of having) different texts of law would embody this representation. 1984 text is a signal that the Doctorate now is considered a common object across disciplines. For example, the duration must be “two to four years” no matter the discipline.

The 1998 decree instituting the Thesis Contract carries the same spirit. Originally forged by students in Biology seeking to improve their working conditions in the laboratories, the thesis contract actually generalizes to the whole academic field the specific norms of experimental science: three years funding, salary, working environment (rather than work at home as it is the case in social and human sciences), integration of a third part in the supervision (usually, the director of the lab), etc. The “humanities and social sciences” version draft was worked on by a group of students, attempting to create a model specific to those disciplines, but has never been finalized.

Finally, commensurability is reinforced by the introduction of a system of quantitative indicators by the Ministry about the activity of doctoral schools. Commensurability has been embedded in a software to create databases of PhDs, doctoral schools and supervision. Created in 2004, the software SIREDO is a tool to generate comparative analysis and statistics. The Ministry seeks to gather data about the population of doctoral candidates, their academic and geographic origin, male-female ratio, conditions of funding and professional insertion on the job market. This suggest that supervision and Doctorate production was from then on considered as a measurable, productive activity. This gives an industrial, “product” flavour to the Doctorate. Soon after the implementation of SIREDO, assessment reports started to be published regularly. No matter the protests of professionals, and the common knowledge that a Doctorate in Humanities is not the same job and does not take the same time as a Doctorate in experimental science, the indicators system suggests that these are

comparable objects, (input, transformation, output). The Doctorate does not belong to the profession anymore (i.e. discipline), it is a measurable, manageable production.

Commensurability goes together with the dynamic of standardization (measure allows ranking, then judgement, emergence of a norm, and standardization). The Doctorate tends more and more to be defined in terms of standard components and less in terms of discipline. The components are: the dissertation, publications, training, and network (sometimes teaching).

« In summary, from 1984 to 2000, we have gone from a very academic Doctorate, the Doctorate “d’Etat”, written in 20 years and weighing 3500 pages in some cases, to the notion of doctoral training made of a dissertation and additional courses on a span of three years, with a growing non-academic job market. It is the emergence of the concept of training through research as opposed to the training for research.” (Guide du doctorant 2003)

The dimensions of professionalizing, commensurability and scrutiny have been introduced in a process that has been, so far, idiosyncratic and hard to capture. They have been introduced at the macro, legislative level. The fieldwork aims at building a narrative about this evolution on a micro-level in order to document the unfolding of institutional change. This will allow us to characterize the role of practice in institutional change.

## ***Data collection and analysis***

### **Data collection**

We collected our data from 6 different sources

1/ We performed ninety semi-structured interviews typically lasting between an hour and a half to two hours, with heads and administrative staff of doctoral schools, supervisors, PhD



candidates of all disciplines on two French campuses including nineteen doctoral schools. The first campus was reviewed in 2005 and 2006, the second in 2007. We also used two interviews performed by colleagues with two individuals involved in the policy making of doctoral school (2004).

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*Insert table 2 here (“interviews for research”)*

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Our interview guide was light by design (=on purpose), starting with questions on activities and leaving as much freedom as possible to the interviewee to talk about his/her concerns related either to the Doctoral School or to his/her practice of supervision.

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*Insert table 3 here (“interview guides”)*

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2/Observation of pedagogic and scientific councils (or “board”), the main governance device of the doctoral school

3/Observation of 3 meetings held by the university presidency presenting non-academic career perspectives for PhD graduates; we also used a video made by the university, of one of the meetings.

4/Minutes of meetings that had been held in the very early stages of DS creation, at time when participants were wondering about the right norms, how to function together etc...

5/Websites of doctoral students associations were analyzed to capture how these actors emerged in the field, how they are framing and addressing PhD related issues, and which words do they use to address their peers.

6/Legislative texts, reports, and documentation created by the activities of PhD related associations

Following Miles and Huberman (Miles and Huberman 1994), data collection and analysis are concomitant. Phase 1 (Spring 2005) was dedicated to exploratory interviews (n=25) in one doctoral school of chemistry/biology; meanwhile, we collected archives (minutes of board meetings), official documents (such as the Doctoral School application form for new applicants which gives an objective evidence of the existence of the new organization) as well as quantitative data per doctoral schools, such as number of students, number of new entrants, of supervisors, of research centers and so on. This phase was useful to understand the organizational context of a doctoral school.

Phase 2 interviews (Spring 2006, n=35) widened the scope to other Doctoral Schools' informers and started to focus on supervision practices as well.

Finally, phase 3 (Spring 2007, n=30) was set on a second campus to introduce a comparative dimension, and focused on organizational settings and supervision practices. The two campuses are similar in size and reputation. Phase 3 happened two years after phase 1. Doctoral schools are already part of the landscape on campus 2 while campus 1 was still experiencing heated discussions about the missions and duties of the new device.

Field work was primarily designed to understand the organizational aspect of doctoral schools: everyday work, relations with other entities inside and outside university, interdependencies, resources, constraints etc. This organizational study of doctoral schools allowed us to characterize their formal structure and real activities.

In the second part of the field work, we used this data to contextualize the evolution of supervision practices: what evolution is related to doctoral school? What is not? We designed the research in order to collect as many supervision stories as possible and describe the concrete aspects of this activity.. We wanted to see if informers were mentioning the doctoral

school while describing their practices, in what terms, and what norms they were spontaneously referring to: what practice seems “normal” to them, what seems “shocking”.

We also interviewed doctoral students and PhD graduates, to have their side of the story (we sometime have one supervisor and his/her student(s)), and see how they were relating their current activity of doing research and writing a PhD thesis to their professional future. For the doctors, we were interested in the retrospective account of how they had found a job.

### **Data analysis**

Analytical tools included field journal in order to keep track of observations (astonishments, remarkable facts) that arise at first (and disappear quickly after repeated contacts with informers) and literal transcription of interviews.

For each interview, we wrote a memo consisting of four main areas:

- what are the themes/issues mentioned by the interviewee? What does he/she say about them?
- a synthesis of the positioning: opinion about the DS, practices of supervision
- remarkable quotations (surprising, shocking, unexpected, condensing...)
- interpretations, hypotheses and links between the issues

A second researcher went through the interviews as well and suggested a first coding plan structured around “organizational” and “supervision” issues, and a third category of “innovations”.

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*Insert figure 6 here*

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This coding structure was confronted to the data condensed in the memos, presented below.

- University uses DS as a mean of coordination and control of supervision practices and output
- Academics involved in DS have a hard time to convince colleague to get involved and/or to take it seriously

- Academics limit the power of DS (ex: DS is not meant to re-write the scientific policy of the research centers)
- Academics involved in DS limit their own legitimacy to dictate norms and practices of supervision
- The decision of accepting a doctoral candidate is ultimately up to the supervisor, and based on his/her personal knowledge of the candidate
- Training sessions set up concerns transversal topics such as English, resume writing, and computer tools
- What is put forward for the training is the number of hours and the fact that the DS is able to check on the presence of students
- In experimental/hard DS (Bio, Chem, Engineering, Physics, Maths) funding is mandatory
- In human and social sciences, funding is a minority (20% of PhD candidates)
- Interactions frequency diverse
- Socialization modes diverse
- Competition set up at the entrance, but ultimate choice is the supervisor's
- Conflict mediation attempts, bothered by self doubt about own legitimacy

After sorting out the quotes, we simplified the coding by gathering categories, and identified “Innovations” e.g. new ways of performing the activity.

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*Insert figure 7 here*

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Themes “ORGANIZATIONAL ISSUES”

In “*relationships with outside*”, we sorted quotations mentioning organizational and institutional actors the DS is in relationship with, such as other entities in the university (university dean, centralized administrative services, research and teaching departments) and providers of PhD scholarships (local government, medical associations, industries).

The category “*relationships inside*”, gathers quotations illustrating exchanges and interactions within the scientific and pedagogic board, and between the council and DS population (supervisors and students).

## Themes “SUPERVISION ISSUES”

“*Set up procedure*” contains quotations referring to the steps preceding the PhD. How do supervisors and students get acquainted and decide to work together? Who chooses the topic? When the funding is mandatory, how is it attributed?

“*Interaction*” gathers quotations describing concrete aspects of the work and the craft of supervising: tasks supervision consists of; Justifications used by informers to support their practices; disagreements expressed. We also put in this category quotations expressing the “taken for granted” of supervision for each informer: norms, habits, comparison with other disciplines (duration, conditions of work), and expression of shock or opposition against aspects of the reform.

“*Socialization*” gathers quotations describing modes and mechanisms by which the student becomes a researcher. It is either the projected path of progression described by a supervisor (example “during a PhD, the student is supposed to do this, learn that, and acquire these competencies...”). Or the actual discovery, by a PhD candidate, of the professional environment of research, first experiences as a researcher (participation in conferences, submission for publications, teaching...). It also refers to the environment of work (presence of a team, of shared facilities, deadlines, interdependencies, constraints, meetings...).

## Themes “INNOVATIONS”

We created this theme to identify the actual innovations introduced by the doctoral school in the practices of supervision. Beyond discourses and political intentions, it spots the novelties informers have encountered or organized in the recent past.

“*Open competition*” is set instead of local recruitment in an experimental DS.

Additional “*Training*” is introduced and made mandatory in most schools.

A “*thesis contract*” is now signed at the beginning of the PhD between the part takers (university, doctoral school, research center, supervisor, and student), specifying their respective rights and duties and suggesting what to do in case of conflict.

Some occurrences of “*conflict mediation*” can be identified in the informers’ accounts. They refer to cases in which supervisor and student cannot or do not want to work together anymore and a third party steps in to try to solve the problem.

These are the innovations we were able to identify that modify the concrete practices of supervision, that is, way of doing currently used by supervisors in their everyday activities.

## ***Results***

### **Relationships with the outside**

While doctoral schools are meant to elaborate their own policy of research and training, university presidents use them as a tool of coordination and control over supervision practices and supervisors, soon creating a “coordination bureau” in the first campus, and a system of “college” (federation of several doctoral schools) on the second one. This suggests by contrast that supervision practices are the realm of disciplines, and that it had remained beyond the reach of bureaucracy.

Existing entities such as “UFR” (University department) or central services “scolarité centrale” contest the attribution of what was once their mission to the newly created schools (for example, the registration of doctoral students and the research policy). Doctoral schools come across as new and therefore unnatural. Their legitimacy is easy to question, even more

so that they received little means to function (one part-time administrative position per school).

Doctoral schools are asked a set of activity indicators by the Ministry, suggesting an attempt to frame and control the supervision conditions and output.

### **Relationships within the organization**

Academics get involved in the DS based on volunteering. They report the lack of interest of their colleagues for the activity of the DS, except when it comes to talking about money.

As DS dean or scientific council representatives, academics generally question their own legitimacy to dictate norms or “good practices” regarding supervision. Some think that they can only “give indications and mention problematic situations, without naming anybody”, other reluctantly get themselves to intervene in conflict mediation, while the most convinced of this legitimacy will stop supervisors to get a student if the conditions do not seem to satisfy a number of criteria. Nevertheless, the conceptualization of oneself as a representative of the collective, as opposed to “colleague” opens the path for normative action. (When they act, they see themselves as “representative of a collective” and not as colleagues intervening in someone else’s business anymore).

Another phenomenon of self-censorship is to be found when academics limit themselves as DS representatives, only to preserve their own autonomy as researchers (for example: “the DS is not meant to decide for the scientific policy instead of the research centres” or “when it comes to the choice of doctoral candidate, the ultimate decision belongs to the supervisor”).

Students’ participation to training is not supported or encouraged by all academics. Some of them think it’s a waste of time for students whose main focus should be on research. Here, the introduction of a new practice – course-based training during the PhD – triggers the

emergence of competing interpretations about what a PhD should be primarily: training or a contribution to research?

The collective attribution of scholarships, in a context of scarcity, leads to the building of a procedure based on common criteria. These criteria are objectives – number of supervisors, size of the team, tour de role... - so as to minimize to part of judgement of colleagues on each others. In most cases, the main concern is to preserve peace – through a perception of equity – among colleagues, rather than funding a scientific policy. This recalls the collegial ethos: no one is entitled to judge a work or a project that does not belong to one's discipline.

### **Supervision issues**

Whether it is about duration, funding, research project set up, frequency of interaction or mode of socialization, there is no common standard across disciplines. Some standards might be shared by all the members of a discipline (notably is experimental science where the socialization of production means triggers the emergence of common norms). But even in this case, the non-respect of these standards is not sanctioned. Thus, the way supervision is performed is very diverse across the academic field. The autonomy of the professionals even towards their peers from the same discipline is very high. The taken for granted is that the way academic supervise is a private territory.

Analysis of practices and their relations with competing interpretation of the Doctorate show how practices embody values, representations and definitions.

### ***Funding/no funding***

Whether mandatory nature of funding is respected or not is closely related (significant) to the perception of what a Doctorate is. When the funding is considered as mandatory by collective



shared norm, it has the Doctorate entering a whole network of social relations and interdependencies.

- the search for funding put the supervisor in contact with outside worlds – industries, research associations, local governments... through this channel, norms that are exterior to the field can get in. The way one should introduce oneself, his/her work's interest and value, the argumentation must borrow the forms that are legitimate and valuable in that world.
- The presence of a funding introduces a third party and the notion of a counterpart. Funding means that there are some expectations on the scientific work that is being performed. Deadlines and the demand for results are more stringent than in the case of a non-funded Doctorate. Research is not for oneself exclusively, not just part of an individual process, but to answer some sort of social demand. As a result, the norm of the mandatory funding validates a representation of the Doctorate as a productive project integrated in a wider social demand.
- The obligation of funding introduces a limit to the number of doctoral candidates that a research centre can afford.
- Funding introduces the fact that the doctoral student is being paid for his/her work, and therefore might introduce a dimension of salaried work, with the subordination link that it suggests. The relationship between a supervisor and a student is different in the case of a paid job or an unpaid study; in the former case, we are not in the “volunteering” anymore, we enter the sphere of professional work.

Mandatory funding has the Doctorate entering a system of social constraints, in an economic and industrial paradigm (notion of utility, choice to make, arbitrage...) since the very

beginning of the Doctorate process, while this moment of social validation only happens at the end of the process in the case of an unfunded Doctorate (during the defence and when the PhD graduate will look for a job).

In the disciplines where the mandatory nature of funding is not respected despite of the doctorate contract (in humanities and social sciences, 80% of the doctoral candidates are typically *not* funded), the Doctorate is removed from any system of social constraints, and from the “job” paradigm. When no money is involved, it is unlikely that the Doctorate will be related in anyway to the paradigm of “job”, even less to the notion of professional experience. It will be more perceived as a hobby, studies or creation. Given the emerging norm suggested by the reform, the distance to go will be paramount for those disciplines in which “unfunded” is the norm. The distance to go will be much shorter for those in which Doctorate is normally funded, and for whom, consequently, the perception of the Doctorate as a job, therefore a professional experience, will be more immediate and natural. Accordingly, the word “recruitment” is not used in the disciplines where the unfunded doctorate is the norm.

When the mandatory nature of funding is transgressed, there is no limit to the number of doctoral candidate that one can have. Doctoral students are not rare or limited resources, they are plenty. Academics can spare themselves spending time building a shared system of criteria and selecting students. Selection will happen by itself (attrition rate, job market, absence of accountability).

The absence of funding also determines a perception of time. Time taken for the writing of the dissertation is not so much under pressure. The quality of the work done is put forward, it is of a higher value than the fact of having completed one’s thesis “on time”.

In a nutshell, mandatory funding = industrial paradigm while unfunded = creation/art/study paradigm. If we use the concept of “worlds” developed by Thévenot and Boltanski in

convention theory, we see that in the academic field, the perception and definition of the thesis can belong to the “inspired world” as well as to the “industrial” or even “commercial” world. However, until the doctoral schools appeared, no one was asked to choose between these two. Norms were built within the disciplines. The doctoral school promotes, through the norm of funded doctorates, based on the practices of the life science/experimental science, the Doctorate of the industrial and commercial worlds. This is one step of the dynamic of change: formal device selects practices among existing sets and legitimates them.

### *Conceptualization of training*

Interviews show that the set up of training for doctoral students is difficult, notably in a context where it regards students of several disciplines. Students are then offered three types of training courses:

- disciplinary oriented (access to Master 2 courses)
- professionalizing, understood as directed at the non-academic job market (CV, patterns, management, professional project)
- courses on communication tools (English, computer skills, research on bibliographic databases)

At the time of interviews, training is still an option in the decree. However, it is made mandatory in experimental sciences doctoral schools. In social sciences and humanities, the mandatory character is controversial. Opponents argue that students are adults, not pupils anymore. They are in a personal initiative of writing a dissertation. They should appreciate for themselves the opportunity to attend or not these training classes. By contrast, in experimental sciences DS, resources are dedicated to the set up of computerized programs controlling the presence of students in classes, and checking if they attended the required amount of hours by

the end of their Doctorate. On the other hand, there is a limited enthusiasm and support from supervisors for these training sessions. (Waste of time, useless, non relevant). these two facts put together lead us to interpret this as a ceremonial set up. At best, it is considered as a separate part of the Doctorate (not related to the dissertation work). At worse, it is perceived as a waste of time, an activity that keeps students away from their research. When professionalizing is mentioned, it is understood as “professionalizing to the research professions ».

### ***Frequency of interaction***

Frequency of interaction varies from daily to once a year, and the appreciation of “what is right” depends first on the discipline, second on the supervisor. Again, the perception of who the Doctoral candidate is impacts the practice. He/she can be perceived as an adult engaged in a personal research, needing minimal guidance, upon his/her request. If, on the contrary, they are perceived as students engaged in a professionalizing curriculum, then it requires a closer interaction. Supervisors feel more or less responsible for creating the conditions for socialization to the environment of research for their students (incentives to publish, teach and go to conferences). Again on this issue, the doctoral school making training mandatory will select one representation of the doctoral candidates amongst those which were co-existing.

### **Innovations**

This theme describes new organisational features within the PhD training.

#### ***Open competition – recruitment partially from other universities***

Before, PhD students were hired on a local basis, based on personal knowledge. There was no mobility even within the same university, from on master to supervisors or departments not involved in the master. Competitive recruitment based on previous performance in research

and the quality of the research project has been implemented. criteria. Issue = to keep the final decision up to the supervisor while complying with Ministry's demand and taking advantage of the opening → DS role is limited to select relevant candidates.

The passage from individual to collective attribution of funding. Issue = how to find common currency to rank the candidates from several disciplines. → Reliance on objective measurable criteria to avoid "subjective" judgement between colleagues, and "tour de role". Avoidance to make any decision.

### ***Mandatory course based training ;***

Set up of training program. Issue = come up with classes interesting several disciplines. Result = transversal topics such as English, resume writing and computer tools. no PhD level specific classes. Professionalizing interpreted as professionalizing for non-academic job market.

### ***Thesis contract***

### ***Conflict mediation***

- The involvement of a DS dean in a conflict between a student and his supervisor. Issue = she questions her own legitimacy to intervene in a colleagues supervision. → She can do it because she refers to herself as "the representative of a collective" and not as a colleague anymore.

### **Second-order coding**

The analysis of the first-order categories lead us to mobilize the following concept to account for the evolution of the field studied:

- a high professional autonomy
- a strong ethos opposing the managerial posture (refuse to take side)
- a high diversity of practices within the academic field, no dominant norm
- the introduction of a new, unnatural device (the doctoral school)
- performativity of the new device relies on proximity of norms, arrangements and habits, identification of a new problem, or comparison through commensuration
- performativity hindered by the absence of sense making, and when the challenged definition of the “taken for granted” persists within the field

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*Insert figure 5 here (“qualitative analysis overview”)*

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While the role of institutional entrepreneur is critical in this change process, it could not have made an impact without drawing on existing practices. Practices diversity translates a variety of material conditions, stakeholders and allow several competing definitions and interpretations of the institution of the Doctorate. However, practices are not “competing” as long as there is no common system to measure the output, that is, as long as the system remains loosely coupled. No one is asked to justify their practices or prove that there are efficient or better. Once more coupling has been introduced within the field through indicators, practices are forced into a ranking and one definition is superior to the others in terms of norms. This leads to the apparition of a category of “deviants” and modifies the boundaries, members, and the rules of membership of the institutional field. However, there is no mechanical dynamic by which sub-groups close to the new norms manage to implement the reform, and others would not. The mechanisms by which the reform introducing a new

formal structure is performative are, beside closeness to the norm, the identification of a new problem, and comparison. On the other hand, the reform is hindered if some of its features are not relevant to the professionals, if they do not make sense of it, if an existing view of the institution remains dominant and persist. Here our example is training that does not get implemented other than ceremonially, because no sub-groups view the Doctorate as a generic diploma that should compare to vocational training and lose its flavour.

[c'est un copier/ coller? Comment cela s'enchaîne avec la page 37? ]We present our process model of change with X hypothesis putting in relation the concepts identified in the field work.

1) Diversification of practices introduces variance which opens the door for comparison and institutional entrepreneurship (IE or social movement)

a. All the more that there is

i. Evolving paradigm (or logics?) at the social level (here: managerial logic, industrialism)

“Shifts in institutional logics can affect which economic conditions can be viewed as problematic and how they can be addressed by a change in the strategy and structure of an organization (Fligstein 1990; Thornton and Occasio 1999)” Thornton 2002

ii. Feeling of injustice that we conceptualize as “dissonance between new entrants ex-ante expectations and actual rewards”

2) Diversification is more likely

a. when the profession is highly autonomous and the field is loosely coupled;

“Management research, however, is also made up of several sub-disciplines that identify it as a ‘loosely coupled field’ (Greenwood and Hinings 1996: 1030), and contributing disciplines may draw on different ‘repertoire(s) of belief with which to contest concepts of legitimacy’(Townley, 1997: 261)”. (os Symon 2008)

b. when the demography is changing;

c. when sub-groups are in contact with diverse connecting fields.

3) reform will have a performative effect through the evolution of practices, because parts of the field are already close to the norm, possess the right tools and arrangement; because new problem will be framed as possible to be solved by the new formal structure; because of comparison. The role of indicators measuring activity is critical as it introduces commensuration.

4) Reform will be hindered because it is not made sense of by the profession, by any of the sub groups.

« Townley (1997) has examined the introduction of performance appraisal in universities. She concluded that although there was public compliance in introducing this new working practice (given the pressures of coercive isomorphism), the specific form of appraisal introduced was in many cases informed more by the institutional logic of ‘the liberal academy’ than that of ‘market rationality’ (which underpins NPM). Thus, in her study, a certain amount of resistance to these changes was enabled by drawing on alternative institutional logics, resulting in institutionalized practices that were something of a hybrid of collegialism and managerialism ». (os Symon 2008)



# A PROCESS MODEL OF INSTITUTIONAL CHANGE

## What does trigger change?

The evolution of material conditions: demography, access to resources, contact with third parties → emergence of new practices. In a context of high professional autonomy (loose coupling, no scrutiny), diversification of new practices, carrying the seeds for competing interpretation/justification of the institution. It introduces competing interpretation of legitimacy (Suchmann 1995: what and what for?). Set the path for de-institutionalization based on functional criticism (some set of practices works better than the others regarding emergent paradigm). Institutional entrepreneur will promote one dominant design imitating “performing” practices.

Hence

*H1: the higher the diversification of practices, the more likely the trigger for change*

Diversification = coexisting, diverging practices reflecting diverse material conditions and interpretation of the institution. Variance +

Diversification triggered by

- demography
- professional autonomy
- loose coupling

## **What does explain that actors will pursue or resist change?**

Diversification of practices introduces coexisting institutions, among which certain actors will try to choose the fairest (social movements) or most efficient (institutional entrepreneur) from a certain social point of view.

*H2: the higher the variance in the alignment of internal practices with external institutional logics, the more likely the trigger for change*

Social movements (e.g. new entrants) that experience dissonance between ex-ante expectations and actual rewards contest some practices, paving the way for contesting some of the taken-for-granted dimensions of the institution.

*H3: the higher the dissonance between new members' ex-ante expectations and ex-post experiences, the more likely the trigger for change*

Institutional entrepreneur wants to promote one interpretation amongst others, rhetoric based on social efficiency (the origin of deinstitutionalization is functional as identified by Oliver).

When competing logics, room to develop different strategies and to IE to have stronger strategies

*H4: The richer the number of competing institutional logics, the more room for IE actions*

Formal structure introduces commensuration and selects those interpretations that are aligned with external logics. When commensurability is in a standardised form like software, it can be appropriate by different groups and reuse. The performativity process is stronger

*H5: When commensurability is formalised and standardised, it gains in performativity. Commensuration triggers institutionalization of change through practices*

### **What explain the output?**

Proximity, new problem framing, comparison will lead to adoption of new practices.

Absence of sense making will lead to old interpretation persistence and ceremonial adoption.

(The selection of one interpretation of the institution amongst others will leave) part of the field as deviants. Become marginal and/or exit the field → modify boundaries.

## **CONCLUSION**

This model attempts to link ongoing, long-term, incremental processes of change with more identifiable, discrete initiatives such as a public policy. We have shown that the reform of doctoral schools takes up on existing practices in supervision, thus legitimating one set of practices over the others in the academic field: research as a collective activity, PhD student as a worker getting on the job training, and PhD as a diploma. In turn, implementation by actors, depending on their distance to the promoted practices and the ability to integrate a new practice in their activity without threatening their mission, will craft the final shape of institutional change. Practices play a critical role as they inspire, support but also limit change, taking in account both pragmatism and legitimacy.

The place of practices in the model explains why and more importantly how actors and agency play a part in the happening of change, even though they are embedded. They are in charge of a social activity that evolves in connection with other fields, and they also perform this activity in a larger context of meaning such as the profession, and their missions.

Examining how actors deal with legitimate practices allows seeing this crafting of change. However, this important role of agents supposedly embedded leads to question the notion of embeddedness. The complexity in multi-layered, diverse institutional fields is such that actors are hardly embedded in one single set of meanings. Logics coexist within the same field, and members typically confront, assess and occasionally modify the sense they make of their environment.

Finally, this model questions the traditional dichotomies between types of changes: radical/incremental, top-down/bottom-up, or macro/micro. Change is the result of both types of process, and we tried to show by which mechanisms they are connected and impact one another.

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