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How Did the Neoclassical Paradigm Conquer a Multi-disciplinary Research Institution?

Economists at the EHESS from 1948 to 2005

This research is greatly indebted to Brice Le Gall’s and Nadège Vézinat’s help in collecting PhD committees and exploring economic networks. It rests partly on data collected with a research group on elections at EHESS (Baciocchi et alii, 2008). Comments from Marion Fourcade Gourinchas, Pierre-Cyrille Hautcoeur and anonymous referees were very helpful. Errors and imperfections are mine. Jill McCoy did a great job for improving the English.

1 The fate of economics during the twentieth century is very astonishing. Almost no discipline has experienced such growth or political and social success. If we consider mathematics or history, comparing the beginning and end of the century, we would of course see some striking differences but also a rather strong continuity and a similarity of status. Economics, on the other hand, has changed radically. First, the discipline’s internal content metamorphosed. Among the social sciences, it is now the one that most resembles the natural sciences, especially physics, with its hypo-deductive methodology based on mathematical a priori models and its more recent concern for empirical econometric verification (d’Autume, Cartelier, 1997). Since the seventies, economics became the dominant discipline inside the social sciences and extended beyond its traditional domain of prices and revenue, a phenomenon quoted as economic imperialism (Lazear, 2000). Economics did not only alter the academic equilibrium in the social sciences but also had an impact on economic and political life, inspiring the way economic actors make decisions (Callon, 1998), and replacing law as the main discipline of government (Dezalay, Garth, 2002).

2 This scientific and social success did not apply to the whole discipline but mainly to one of its branches, by now dominant in almost every country: the branch generally referred to as “neoclassical economics” or “mainstream economics”. Lazear links its success to the comparative advantages of its three main concepts: rationality, efficiency and equilibrium (Lazear, 2000). But besides its teleological flavor, this approach limits itself just to scientific reasons, failing to explain why the neoclassical paradigm progressed not simply via the resolution of a scientific dispute similar to the ones common in natural sciences. There is no one undefeatable scientific argument to explain a general conversion, but rather various rates of changes at different times in different countries and in different institutions. Moreover, this change might not be the end of history. The recent rise of behavioral economics, in collaboration with psychology or biology, i.e. the “barbarians at the gate” feared by Lazear, substantially altered the paradigm of economics. As paradigmatic changes are not only global and abrupt but also local and continuous, it is important to study them on small levels in order to understand their full dynamics.

3 The following case study will focus on the EHESS (initially designated as the 6th section of the Ecole pratique des hautes études – EPHE), an institution that was created in 1948 and devoted to the social sciences. Economics in this institution constituted one of the smallest of the four large disciplines (with history, sociology, anthropology). During its first twenty-five years, the EHESS hired mainly Marxist or humanist economists such as Bettelheim or Fourastié, economists generally very far from the American mainstream. At the end of the 1970s, recruitment changed radically with scholars like Guesnerie, Laffont, and Bourguignon. How was this change possible? How did the new school manage to reproduce itself and to impede the development of rival branches? How did it build alliances with other disciplines in order to do so – and this, despite suspicions of imperialism?

4 This paper will try to answer these questions by exploiting the archives of the EHESS and two statistical databases, the PhD committees from 1960 to 2005, and the recruitment process
from 1960 to 2005. The paper is organized as follows: the first section offers a Bourdeusian theoretical perspective in order to understand disciplinary dynamics. The second section shows that on the basis of the PhD committees, we can trace the polar oppositions between different types of economics. The third section describes the roots of the 1970s change and shows how international capital was a key element, also documenting the political alliances necessary for economists to survive in a rather hostile academic environment.

1. The dynamics of a scientific field

Since the seminal work of Kuhn (1962), questions about scientific change, the appearance of new ideas and, moreover, new paradigms have been central in the sociology and history of science. Kuhn stressed the fact that changing from one paradigm to another does not follow the sole dynamics of truth and generality. Scientists work most generally inside “normal science”, trying to solve enigmas inside the dominant paradigm using basic paradigmatic principles. While they very often find some kind of anomalies that do not seem to fit the basic principles of the paradigm, these anomalies rarely constitute a reason to abandon the dominant paradigm. It is not clear whether the anomalies are a real reason for the building of a new theory or rather a possible artifact or moreover a hidden consequence of the basic principles of the paradigm. Abandoning the paradigm is not an easy task according to Kuhn, since it leads to the overthrowing of a highly structured canon to which a young scientist has been socialized. It requires both an accumulation of anomalies and a new paradigm in which the anomalies seem to have an explanation. Empirical proofs of new paradigms are very often weak and generally face strong resistance. It takes sometimes more than a generation for a paradigm to impose itself. Switching to a new paradigm is an act of faith based both on esthetic appreciations and on social and institutional aspects: the conquest of new positions inside the academic system and the building of a new canon, or the formation of part of a new generation of students particularly sensitive to new theories, theories that in their innovative character might guarantee the students a place in the academic system. Some of the social and institutional features that govern the transformation of paradigms are even more acute in the social sciences than in natural sciences. The complexity of the facts studied (human facts), the historicity of objects (Passeron, 1991), and the difficulty of performing experiments and establishing definitive proofs all tend to intensify competition between rival paradigms. Paradigms are thus rarely abandoned on the sole basis of scientific defeat or lack of explanatory power.

In order to develop a comprehensive sociology of scientific change we must avoid two simplistic positions: the scientist vision and the externalist vision. In the scientist vision, like that of Lazear (2000), the new paradigm replaces the old paradigm only because of an increase in quality: $Q_{\text{new}} > Q_{\text{old}}$. It supposes that a) there exists $Q$ an objective measure of the quality of a paradigm that imposes itself to scientists and b) the comparison of quality turns in favor of the new paradigm. In the externalist version of scientific change (as represented in some early work of Latour, 1988), quality remains undetermined and a new paradigm wins mainly if $R_{\text{new}} > R_{\text{old}}$ that is, if the supporters of the old paradigm have more resources (social, economic, political) than the new. This externalist vision forgets that scientists believe largely in $Q$ and that scientific beliefs do have an impact. On the other hand, the scientist vision forgets that $Q$ is not a natural exogenous phenomenon but a mere designation of subjective, plural and heterogeneous evaluations which cannot be aggregated into a single transitive order. Discussion of different paradigms is not just a discussion of quality but also a discussion of what is to be valued in science. The challenge is not to outperform an older paradigm on the same value scale but rather to transform the value scale; to turn uninteresting problems into problems of scientific interest, and problems of scientific interest into uninteresting problems. The “struggle of the gods” observed by Max Weber (1958 [1919]) in ordinary life can be found in scientific life as well. We may therefore follow Bourdieu in envisioning a scientific field in which scholars compete for peer recognition and aim at a monopoly of scientific authority (Bourdieu, 1976), and where scholars work to transform resources (external and internal) into judgments of quality. Hence, in his work on academia (1988), Bourdieu stresses the importance of different forms of capital (scientific, bureaucratic) leading to competing forms of value
scales. Applying this theory together with the method of multiple correspondence analysis on French economists, Lebaron (1997, 2000) shows the polar oppositions among dominant economists between two types of legitimacy, research economists who acquire legitimacy mainly through scientific work and “political” economists, coming more generally from the upper classes, who combine scientific legitimacy with economic and political legitimacy through durable links with firms and political parties.

The knowledge of the global structure of the field of economists in France at the end of the 1980s must be completed in two directions. Since the paradigms are mainly discussed and renewed at the research pole of the field, a more detailed analysis of oppositions in this subfield must be done. Here, the use of social network analysis has the great advantage over classical correspondence analysis of enabling a precise characterization of the scientific communities involved in a scientific discussion, making it possible to determine if those communities are structured as separated “sects” united by a paradigm and by one or several prophets.

Second, scientific change must be explored through an analysis of field dynamics (Denord, 2007, Fourcade, 2009). Although most Bourdieusian field studies are generally synchronic, Robert Boyer (2003) in his reading of Bourdieu showed that the French sociologist’s theory of field is not only a theory of reproduction based on habitus and capital largely external to the field, but also a theory of change based on five mechanisms: innovation instigated by the dominant players inside the field, the entry of new actors, the endogenous shifting of the borders between the fields, struggles for State power and de-synchronization between field and habitus due to changes in context. In the same way, the current challenge is to understand the factors that led the neoclassical economists to win the late 1970s legitimacy struggle at the EHESS. The mechanism we explore here is that this success was largely acquired once those new actors in the field convinced actors in other fields (especially historians) to take international reputation, rather than their own subjective evaluation, as a general equivalent for measuring economists’ value.

2. Switching paradigms

2.1. The origins of the EHESS

The 6th section of the École pratique des hautes études was founded in 1948 mainly under the impulsion of Charles Morazé, Lucien Febvre and Fernand Braudel, historians of the “Annals”, a historical school that pleaded in favor of the study of long-term social and economic structures, thereby opposing traditional historians mainly focused on the description of short-term political events (Mazon, 1988; Revel, 1996, Delacroix et alii, 2005). The project of the École des annales was to create a locus where history could renew itself through interactions with other social science disciplines, thus developing the methodological and conceptual tools necessary for exploring the permanent structures of the “longue durée” (Braudel, 1980). Among the strategic allies (sociology, anthropology, geography, economics) that could help these historians in their symbolic revolution, economics was high on the list from the outset. The “second” generation of the Annals (Braudel, Labrousse) saw the long-term history of prices and production as a select tool for breaking with the event-driven history practiced in France. They were therefore very much interested in economic research on long-term cycles à la Kondratiev. Labrousse was himself in a sense a symbol of the type of economics the historians wanted to promote. He defended his first PhD in economics in 1932 on prices and income in the 18th century (Esquisse du mouvement des prix et des revenus en France au XVIIIe siècle), and turned to history for his second PhD in 1943 on the economic crisis at the end of the Ancien Régime (La crise de l’économie française à la fin de l’Ancien Régime et au début de la Révolution). Whether it was that Braudel and Morazé were not very familiar with French economists, or that, after the death in 1935 of François Simiand, the type of economists they were looking for were uncommon amongst French economists who remained more or less stuck inside law faculties, thus paying little attention to scientific research (Le Van-Le Mesle, 2004, Fourcade, 2009), or even that the 6th section was in competition with other projects led by economists such as Charles Rist (Tournès, 2006), the founders of the EHESS
appeared to have difficulties finding economists. Hence, in the first project in 1947, Morazé did not give any names for the professors of the economics courses (Mazon, 1988: 87). But nevertheless, despite this initial difficulty, they did hire some economists in 1948: Charles Bettelheim, Jean Lhomme, Jean Weiller, André Piatier, Victor Rouquet La Garrigue. Aside from Bettelheim, a Marxist specialist of socialist planning hired as full professor, all of these economists were hired as joint professors (directeurs d’études cumulants) and kept their posts (at least in the first years) as economics professors at law faculties. In the following years, the sixth section continued hiring economists from law faculties, people like Emile James or André Marchal, François Perroux from the Collège de France, or practitioners like Henri Ardant and Edouard Escarra (both CEOs of banks). Engineers like Joseph Klatzmann (from Agro) and Jean Fourastié (from the École centrale) were also hired. Moreover, in 1957, the sixth section hired two polytechnicians working at the Insee, Claude Gruson (X-Mines) and Edmond Malinvaud (X-Ensa). These latter two can be seen as members of the engineer-economists tradition that starts with Cournot, followed by Walras, Colson, Divisia and Allais, a tradition that contributed greatly to mathematical economics but that remained in engineering schools and that, until the 1980s, garnered little recognition in French universities (Fourcade, 2009). If we were to summarize, providing a “big picture” of the economist group at the EHESS during the 1960s, we would divide the group into three types. First there were the traditional doctrinal law faculty professors, not very much involved in research. Victor Rouquet La Garrigue, whose published work is particularly rare, or Jean Weiller, Pierre Coutin or André Piatier, who did a little research and published mainly synthesis, textbooks and reviews of books, are all examples. Second, there was a tradition of social science economics, that is, economists carrying out numerous empirical researches at the borderline of one or several other social sciences, like history (Lhomme), geography (Klatzmann), sociology (Perroux), organizational planning and engineering (Fourastié), ecology (Ignacy Sachs) or even Marxism (Bettelheim). Despite differences, all of these economists have in common their rejection of pure economics and their idea that economics can only progress by hybridization with other social sciences. In the third, rather small group, we find engineer-economists like Gruson and Malinvaud. These three groups should be seen merely as poles linked in the sixties by a continuum. The difference between the first and the second pole should especially not be overemphasized. Piatier and Coutin viewed themselves for instance as “non conformist economists”, voicing the same kind of interdisciplinary work as on the second pole, which, moreover, was divided on political issues and on some strong personalities like Perroux.

The 6th section institution promoted new forms of teaching (the research seminar), and new forms of research which valued interdisciplinary exchange. In 1948, its faculty came mainly from four disciplines: history, sociology, anthropology and economics. Afterwards, it also hired scholars in geography, linguistics, psychology and humanities, but those new disciplines did not significantly challenge the domination of the “big four”. During the first ten years, the 6th section could only deliver its own diploma, whose value was not formally recognized by other French universities. Therefore the rise of students and of faculty was rather moderate. In 1958, it acquired the right to prepare the new third cycle PhD degrees formally defended at the university. It remained however excluded from the more prestigious State PhD, required in order to become a full professor in universities. Despite this limitation, the sixth section became very attractive in an environment where student bodies were growing and new ideas were in high demand. In 1975, the 6th section became independent and was named the EHESS. It could therefore deliver both 3rd cycle and, moreover, State PhDs, without the guarantee of a university.

2. Invitations to PhD committees reveal inter-EHESS networking

In order to follow the social structure of scientific discussion in this institution, we have collected all of the 6200 PhDs with their committees prepared at the EHESS (Godechot, 2011 [forthcoming]). We consider that the invitation of a member of the committee by the supervisor constitutes a relevant link for objectifying patterns of academic life (Godechot, Mariot, 2004). Since the committee aims to certify knowledge and enable academic reproduction, this type of
link is much more collaborative and robust than the traditional citation or co-citation links used in history and the sociology of science (Small, 1973). It is also more stable in time and across disciplines than co-authorship (Moody, 2004, Goyal et alii, 2005), since, in French economics, single authoring remains quite common. Even if the composition of the PhD committee is also set in order to favor the recruitment and the career of the doctor, invitations, especially when they are repetitive, constitute a good proxy for intellectual and social proximities. At this point, the approach of the disciplinary dynamics is mainly explorative, using successive graph visualization and analysis (Moody et alii, 2005), since we have not yet identified the structural indicators capable of correctly summing up the complex dynamics at play. We have plotted on successive graphs all the relations of invitations between persons we identified as “economists”, and also the relations of invitation between economists and members of other disciplines.

The graphs 1 to 5 are organized as follows. An invitation at a PhD is represented by an arc between two points: A→B means A invites B to his student’s committee. The size of the arcs is proportional with the number of invitations, the size of the points with the number of instances of participation in committees involving economists. The color indicates the discipline: blue for economists, green for sociologists, yellow for historians, red for anthropologists, gray-blue for geographers. The position of points is based on the energy Kamada-Kawai algorithm which minimizes the variance of arcs in order to maximize readability. The graphs were improved by hand.

The structure of the network remains globally similar from 1960 until 1980 (Graph 1). We have a rather strong interconnection between a small number of law professor economists and social-science economists: André Platier, Pierre Coutin, Joseph Klatzmann, Victor Rouquet La Garrigue, Charles Fourastié. Within twenty years, there is some renewal with arrivals like Alain Barrère, Henri Aujac, Rouholah Abbassi or René Passet. These economists are not only linked to one another but also very much linked to the other social sciences, especially geography at the beginning of the period (Pierre George, Michel Rochefort, Pierre Monbeig), and to sociologists mostly in the 70s (Jacques Vernant, Pierre Marthelot, Louis-Vincent Thomas and Henri Desroche). These allies were generally involved in international and development sociology or geography. Besides a few PhDs working on the empirical economy of developed countries, there was an increasing number of PhDs dealing with development issues, generally authored by students coming from third world countries.
Although linked to this core, Ignacy Sachs and Charles Bettelheim were a somewhat unusual in their invitations and their topics. Sachs, an economist who worked with Kalecki both in India and in Poland, emigrated to France after being accused of Zionism by the Polish communist government and was hired by the EHESS. He was first influenced by Marxism and worked on planning, but became a heterodox Marxist interested in ecological and environmental issues, forging new concepts like “eco-development” (Interview). Among the economists, Sachs was probably the most involved in the fusion of economics with a wider social science conception that would be also historical, geographic, ecological, and sociological. His regime of invitations, first targeting geographers and then sociologists, historians and anthropologists, lead him to invest rather little energy in relations with the cluster described above. Charles Bettelheim, a much more orthodox Marxist, also had his own regime of invitations, rather distinct from that of other economists. A planning specialist and former advisor for such socialist governments as Cuba or Algeria, Bettelheim became very popular in the 1970s among young leftist students as a result of his support for Maoist planning and his fierce critiques of the USSR bureaucratic model (Denord, Zunigo, 2005). The scholars he invited to the committees of his PhDs came from various disciplines (history, philosophy, economics, sociology) but they often shared an interest, if not an active involvement, in structural Marxism (like, for instance, the Marxist sociologist Nikos Poulantzas or the Marxist historian Pierre Vilar).

Although hiring engineer-economists at the EHESS could have been a way of developing mathematical economics inside the French university, this evolution did not actually occur. There are several reasons for this. First, Gruson and Malinvaud were deeply involved in the management of the Insee, headed by Gruson from 1961 to 1967 and Malinvaud from 1974 to 1987. Therefore, they did not invest very much in teaching nor in the validation of PhDs. Recruited in the early 1970s, Serge-Christophe Kolm, was an engineer trained at Polytechnique and the École des ponts. His involvement was quite similar to that of his two elders. While his personal work in mathematical economics – more precisely, in the theory of justice – was very important, his involvement in PhD supervision and committees remained minimal. Perhaps these three engineers were unable to find many EHESS students willing to start work in technical mathematical economics. Moreover, the PhDs they supervised did not
seem very different from those of their colleagues, and the committees they chose did not result in new, radical networks. For instance, in 1975, Malinvaud supervised a PhD on the economic activities of Mexican industries. Committee invitations included Victor Rouquet La Garrigue along with Jacques Mairesse and Claude Fourgeaud. Similarly, in 1977, Kolm invited Jean Weiller and Victor Rouquet La Guarrigue for a rather technical PhD (a study of the policy mix through dynamic models).

2.3. The engineer-economists enter the EHESS: the first stage of the conquest

The periods 1981-1985 (graph 2) and 1986-1990 (graph 3) were periods of strong change economics inside the institution. The new economists hired between 1976 and 1984 were mostly trained at French engineering schools or American universities. Jacques Mairesse (hired in 1978, Polytechnique-Ensae), Guesnerie (1979, Polytechnique-Ponts), Jean-Jacques Laffont (1981 – ENSAE), Robert Boyer (1983, Polytechnique-Ponts), François Bourguignon (1983, ENSAE), or Georges Menu de Menil (1976, MIT), Alan Kirman, (1982, Princeton) are examples. Apart from Robert Boyer, a founder of the “School of Regulation”, all these economists developed their research within international mainstream economics. We must not forget that when they were hired, their research was not as voluminous or prestigious as in present times, but most of them had published in the most prominent journals of American and therefore international economics of the seventies such as Econometrika (Guesnerie, Bourguignon, Laffont, Kirman), American Economic Review (Kirman, de Menil), Journal of Public Economics (Gérard-Varet, Guesnerie), etc.

Therefore, even if this new generation was not totally homogeneous, with the presence of the theorist of the School of Regulation, developing his work in opposition to the claims of neoclassical theory, we must stress the strong opposition between the two generations of economists. At the EHESS, the new economists were referred to, and referred to themselves, as “econometricians” (Bourguignon, Guesnerie, 1996). The term is not to be understood in the sense of usual econometrics – apart from Bourguignon, Mairesse and Boyer, most of these scholars were involved in pure economics and did not devote much of their work to empirical economics – but in the sense of the Econometric Society, whose members publish Econometrika, probably the highest-ranked journal of the discipline. It is tempting to describe this split between the generation of interdisciplinary economists and that of “econometricians” as an opposition of reputation and of productivity – in short, of “quality” recognized by the scientific community. This shortcut is probably valid if we restrict ourselves to some of the former economists like André Piatier or, moreover, Victor Rouquet la Garrigue, whose published work seems very limited. However, this claim must be balanced out by scholars with strong international reputations like Charles Bettelheim or Jean Fourastié, scholars whom, despite very different ideological positions, occupied rather similar scientific positions.

Fourastié, professor at the CNAM and the EHESS since 1951 and columnist for Le Figaro, explained to a French society under recovery how U.S. market productivity generated a new material culture of (relative) abundance. His works, such as Le grand espoir du xxe siècle or Les trente glorieuses, met with great public success. He also played the role of political advisor, promoting productivity measures as tools for planning (Dard, 2004; Boulat, 2006). These two first generation economists had some strong similarities when put in comparison with the generation of “econometricians”. First, they were both planning experts (socialist for the Bettelheim, liberal planning for Fourastié). They had a recognized and prolific scientific production consisting mainly of books, and their research was very open to other social science disciplines (especially history, geography and sociology). Finally, they held a critical position towards more formalized and mainstream economics, maintaining rather low visibility inside this latter domain. The contrast with new economists like Louis-André Gérard Varet or Roger Guesnerie was therefore strong. This opposition was not in effect political. Although the average economist of the new generation was probably more right wing and market-friendly than the average economist from the previous generation, the arrival of this generation should not be caricatured as a Chicago Boys invasion. Kolm, an intermediary between the
two generations, was a well-known leftist who advised Allende in the early 1970s along with many revolutionary governments willing to set up equalitarian agrarian reforms. In their theoretical work, Guesnerie and Bourguignon generally turn to state intervention in order to deal with well-characterized inefficiencies (such as financial bubbles or information asymmetry). The change was mainly a change of paradigm and of values inside the paradigm. In the previous generation, mathematical formalization is seen as misleading and leading to sterile realism. Interdisciplinary and very empirical work is seen as an antidote to this deadly unrealism. The econometricians might not have attributed the same importance as Lazear does to efficiency as the main pillar of economic disciplines (hence the work of some of them on some inefficiencies), but they did agree that rationality and mathematical equilibrium were the main ways of developing new concepts and ideas. Those tools, although abstract, could elucidate a fairly complex economic reality much more than the weak and fuzzy tools found at interdisciplinary borders. We have therefore a series of oppositions in the way of making economics: literary – formalized, empirical – pure, open to interdisciplinary work – at the core of the discipline, books – article, in French – in English, for a wide public – for specialists, with both scientific and political goals – with scientific goals first.

Hence, opposition between the two generations manifests itself in the very divergent patterns of interdisciplinary committee invitations. While social-science development economists were strongly related to geographers, anthropologists and sociologists in the 1970s and continued, like Ignacy Sachs, to invite scholars across disciplines after 1985, the new generation only invited very few members from other disciplines and, aside from the heterodox (Jacques Sapir and Robert Boyer), they were hardly invited by the other disciplines. This closure was partly the product of the radical 1980s opposition between “models” and “narratives” in the social sciences (Grenier et alii, 2001), and seemed to be linked to the professionalization and specialization of the new kind of economics. But it showed also how certification of knowledge changed in economics. For a 1970 PhD on the role of Crédit Agricole in the economic development of Senegal, Pierre Coutin the supervisor invited Paul Mercier, an anthropologist, and Louis-Vincent Thomas, a sociologist-anthropologist, who were both specialists on Africa. On a closely related topic, a 1988 PhD on development strategies and grain policies in Senegal and other Sahelian countries, François Bourguignon invited only economists, Christian Morrisson and Jean-Claude Berthélyme. Where some would see a form of disciplinary closure or disciplinary autism, others would see a greater specialization and greater professionalization accompanying the rise of disciplinary requirements.

2. 4. The severance of reciprocity between the “Modern” and the “Ancient”

Network analysis of transitions enables us also to see how the confrontation between the two paradigms occurs. In 1981-1985 (Graph 2), the core of the old generation (Piatier, Rouquet La Garrigue, Passet, Aujac, Guglielmi) was even more cohesive than before, due to the fact it invited much fewer scholars from other disciplines, particularly geographers. At the periphery of this center appeared the new generation as a series of rather isolated or loosely related ego networks (Guesnerie, Gérard-Varet). In 1986-1990 (Graph 3), they connect to each other: Bourguignon invited Guesnerie and Wyplosz, Guesnerie invited Picard, Mairesse invited Boyer. The younger of the elder generation – Ignacy Sachs or Henry Aujac, still quite active in PhD supervision – invited new economists like Guesnerie, Bourguignon or Boyer, as if they wanted to be approved by the new generation. But contrary to usual patterns in social networks and in contrast with what happened in other disciplines during the 1980s at EHESS (Godechot, 2011), we find hardly any form of reciprocity. It seems that the new generation politely accepted seats on the committees of the old, thereby distributing a bit of its prestige. On the contrary, nor prestige nor sign of quality would have been garnered for their students had the new generation invited scholars like Aujac or Sachs to sit on its committees. This strong and striking asymmetry illustrates the violence of the transition between two paradigms and two forms of legitimacy.
Graph 2. Economists PhD committees 1981-1985: the arrival of the engineer-economists

Graph 3. Economists PhD committees 1986-1990: asymmetrical invitations across the “Ancients” and the “Moderns”
Even if a “heterodox” economist like Robert Boyer could be considered by his colleagues to be in the lineage of the ancient generation, especially for the econometricians (Bourguignon, Guesnerie, 1996), his invitation patterns up until the mid-1990s placed him clearly among the new group of economists. Like the econometricians, he was invited by elders such as Aujac, but did not invite them back. Moreover, the original project of the Regulation School was very different from that of the social science economists. It was the construction of a new macroeconomics inspired by Keynes, Marx and econometrics that could enable scholars to explain the various dynamics of growth and crisis in modern capitalism. Interest in other social sciences grew later and was also correlated with the reduction of their public within core economics. Hence, before 1995, the opposition between orthodox and heterodox economics among the young generation of economists did not seem to split the structure of relations as deeply as could be believed. Heterodox invited orthodox economists quite often and they were also to some extent invited by mainstream economists. Jacques Sapir, Bernard Chavance, Wladimir Andreff, three heterodox economists pursuing research on Eastern countries (they were influenced first by Marxism, trained by Bettelheim for the first two, and got closer from the School of Regulation in the 1980s), were invited by rather neoclassical economists like Richard Portes or Georges de Menil. This was particularly the case in the early 1990s when the macroeconomics of transition in Eastern countries became a hot topic (graph 4). Similarly, in the early 1990s, André Chiappori, a specialist in the microeconomics of contracts, insurance and imperfect information invited Olivier Favereau, a member of the French school of conventions. In the 1980s, heterodox and mainstream economists were two possible options for replacing the previous generation of social sciences and law economists. Although they were in intellectual competition, recognition of the other branch’s value was enough to provoke reciprocal invitations. The proximity of the educational and institutional backgrounds of the two branches (as Lebaron’s 1997 correspondence analysis shows clearly) probably helped to maintain a reciprocal level of esteem and social links. Like EHESS mainstream economists, the new heterodox economists were often engineers trained at Polytechnique, ENSAE and Ponts, and worked for the Insee or for the CNRS (especially at the CEPREMAP research center). It is very likely that the relation to leftist political activism in the 1960s and the 1970s was a key element of differentiation among this generation of engineers (Dosse, 1992).
2. 5. The heterodox become disconnected from key networks

But by the mid 1990s, the alliance of the young economists against the old social-science economists seemed to fade away, giving way to a new dichotomy dividing the new generations into two separate groups. The bottom of graph 5 shows a heterodox nebula of scholars (group Sapir – Boyer – Favereau – Thévenot) belonging either to the regulation school or to the convention school. The top of the graph shows the mainstream economics group featuring scholars like Guesnerie, Chiappori, Gerard-Varet, Bourguignon, and Cohen. The mainstream group, regularly linking to economists of the University of Paris I (D’auteur, Cahuc) or to those of the Crest-Insee (Salanié, Kramarz, Fougère) foreshadowed the first definitions of the Paris School of Economics created in 2005 and 2006. The social and paradigmatic roots of the project were apparent: it aimed at uniting the mainstream economists of the EHESS, Paris I, and, in the initial project, of CREST (though the latter did not end up joining the project).

Was the process of field transformation over? The period indeed ended with the victory of the mainstream paradigm over both traditional social science economics and new heterodoxy. New institutional frameworks were created with the Paris School of Economics and with the economics faculty’s increasing autonomy from the EHESS and from other social sciences. But the tale remains to be told. The last period, transitional, was marked by the departure, retirement, and death of some of the not-so-new generation. Newly arrived, the third generation of economists included Thierry Verdier, Thomas Piketty, Eric Maurin. Although it would have been difficult to predict the future dynamics of the discipline, the year 2000 did bear witness to tensions between economists practicing “traditional” pure economics in the manner of Debreu-Guesnerie-Laffont with abundant mathematical models and very little empirical validation, and the younger generation of economists practicing in the style of Maurin, Piketty or Duflo. These younger scholars developed an empirical economics based on sophisticated econometrics (instrumental variables, natural or even field experiments, fixed and random effects) in order to clearly establish empirical causalities. However, their model is sometimes considered as “atheoretical” by some pure economists when compared to purely or mostly theoretical work like that of Gabrielle Demange, Thierry Verdier or Bernard Caillaud. Although some economists say that modern-day economics will value most papers situated between these two branches – papers that contain both a smart mathematical model and careful econometric verification using powerful identification techniques – there are some signs of tension and differentiation in regards to what those two branches may value.

Although anecdotic, the following remark shows the heterogeneity of value within a “mainstream” so broad that it could have several diverging streams: “I know that the professor who teaches general equilibrium complained about the influence of Esther Duflo who is telling to the students that general equilibrium is useless. One can understand why Esther Duflo said this: her problematic is whether to give shoes would benefit Kenyan children because without shoes they are walking in urine and they may catch leptospirosis. […] I may be wrong to make fun of her.” (Theoretical economist, interview).

The rhythm of change seems nevertheless much less rapid and radical than that of the 1980s and owes mainly to innovations at the initiative of dominants inside the field (Boyer, 2003). In this new context, the broad bases of legitimacy in economics remain stable, particularly the importance of American journal rankings.
3. How to change a paradigm? International capital and coalition building

In the second section, we measured the importance of the paradigm change at the end of the seventies, when a new generation, deeply embedded in international theoretical mainstream economics, replaced an older one of non-conformist law faculty and social science economists. Such a radical change cannot only be viewed as the updating of a national (or even worldwide) trend in economics favoring the rise of neoclassical economics in a 1970s context where Marxist, structuralist development, and Keynesian economics are all in crisis (Fourcade, 2009; Jobert, Théret, 1994). The locus of the change also merits examination. It seemed rather unexpected that the EHESS, the strongest supporter of interdisciplinary research in all of French academia and whose faculty in the seventies was largely left wing (if not leftist or Marxist) would move to the heart of mainstream economics. The EHESS, in addition, uses special recruitment procedures called “elections” (Baciocchi et alii, 2008; Backouche et alii, 2009). There are no formal auditions, although it is quite common for some candidates to visit the president or at least members of the bureau\(^6\). Applications are first examined by a multidisciplinary electoral commission comprising the president, the bureau, members of the scientific council and randomly-chosen professors. This electoral commission votes in order to rank candidates. The indicatory ranking is exposed to the full assembly of professors of the EHESS which elects candidates to professorship. During this procedure it is common to support candidates with support letters (electoral commission), or viva voce (electoral commission and general assembly) and the minutes of those events in the archives generally report these supports. Candidates are elected by the full assembly of professors and not hired by a mono-disciplinary jury. Therefore, for an economist to be recruited, he or she must convince not only other economists but also historians, sociologists or anthropologists.

3. 1. Aging economists

The demography of economists at the EHESS contributed to the rise of the new generation, if not directly then at least to a growing concern about the fate of economics in this institution. During the first ten years, the 6\(^{th}\) section of the EPHE recruited an important number of economists and the headcount in this discipline reached nearly 20 by the end of the 1950s
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(raph 6). But after 1960, the EPHE developed its faculty mainly in sociology, anthropology, and area studies (Mazon, 1988). The French intellectual debate of that time was mainly dominated by discussions about structuralism, rather influential in sociology, anthropology and linguistics, but did not strongly affect economics, not at least until the mid-1970s (Dosse, 1992). Recruitment in the sixties and the early seventies grew rare; the group of economists was aging and slowly shrinking due to resignations, retirements or deaths. By 1973, the group of economists was reduced to 15 and the average member was 59 years old. Moreover, within the group, a quarter was on duty, and another quarter was not very active.

Graph 6. Headcounts and average age of economists compared to other disciplines at the EHESS

In the early 1970s, during the assemblies of professors, economists regularly voiced concerns about the dramatic situation of economics in the institution, a situation much worsened by the great difficulty if not impossibility during those years to hire joint professors from the law faculties. In the archives, we find yet more signs of concern for economics in 1974. At that time, the context was favorable for a reflection on the mission of the institution and the future of its different disciplines. First, the project of turning the 6th section into a fully independent and autonomous doctoral school was on track in 1974 and did become effective in 1975. This favored discussion on the missions of the new establishment. Second, a new master degree, the “DEA” (viewed as the first year of the PhD), was created in the social sciences in France, leading to the creation of both theoretical and methodological classes. In order to become a real doctoral institution, the EHESS quickly involved itself in the creation of DEAs in various disciplines, considering content in order to get the education ministry’s accreditation. In the archives of the Scientific Council of the EHESS, we therefore find two reports from Henri Aujac on the future of economics, along with remarks by Jean-Pierre Delliliez.

Those reports were very much in favor of an economic discipline open to other social sciences. They considered that what was taught at that time in economics and social science faculties was very specialized in some economic techniques like econometrics, but was not capable of developing a broad and general view of the economy. Considering that their students came from various disciplinary backgrounds, and that most students were not very well trained in basic economics techniques, Henri Aujac proposed to build something different from what was proposed by traditional universities: to train students in general economics culture by fostering interaction with other disciplines.
3. 2. The seminal Touraine Report and the recruitment of a new generation of economists

Before the turning point of 1976, we do have a few recruitments in the 1970s: 1 in 1972, 2 in 1974 and 3 in 1975. Although quite numerous, they cannot be viewed as a new policy making up for the dearth of the 15 previous years. Three of these recruits, Jean-Pierre Delilez, Françoise Bourquelot and Jean Coussy, were in fact EPHE research assistants working respectively with Charles Bettelheim, Pierre Coutin and Jean Weiller. In 1974 and 1975 they had been promoted to assistant professors. Aujac was recruited without real discussions, as he applied for a non-remunerated position in 1972. Serge-Christophe Kolm was unsuccessful in becoming a full professor in 1969, rather working his way progressively to earning membership through diverse precarious positions (“Directeur d’études suppléant” in 1972, “directeur d’études associé” from 1974 to 1979 and then “directeur d’études cumulant” in 1979). Finally, there was Christian Sautter, an economist engineer from the Insee appointed in a more traditional manner for a joint professorship (“directeur d’études cumulant”) in 1975.

Those three economists (Aujac, Kolm, Sautter) are important as they represented three options for the renewal of economics and they played, or tried to play, a role in the transformation of economics by voicing different types of direction. Aujac was representative of the law faculty- and social science-inspired economics that had been developed at EHESS. As we have seen previously, Kolm was representative of the French engineer economics tradition. Although Sautter was by his training (X-ENSAE) and by his position (Insee), trained in the engineering tradition, the type of economics he developed was rather different, and could be related more to the emerging “heterodoxy” of the 1970s called the “Regulation school”.

In 1975, the project of a Master (DEA) in economics was refused by the French Ministry of Education. The question of economics was discussed at the scientific council of EHESS at the end of 1975. It is important to note that in the first scientific council of the newly created EHESS, there were no economists represented. During the discussion, Alain Touraine, a sociologist, explained to the scientific council that it was “urgent to develop new methods and to de-economize economics”. Maurice Godelier, an anthropologist, replied that the “School had missed economics, but that it should not miss the critics of economics”. Jacques Le Goff, the president of the EHESS and a historian, proposed a meeting devoted to the question of economics. The council decided that the better way to open up economics and to prepare the meeting was to constitute a group of non-economists who would work on economics at the EHESS and would consult economists like Aujac already working on a project. Touraine and Godelier were proposed as members of this commission.

Four months later, Touraine presented a short report in order to prepare the discussion. The work represented for Touraine a chance to switch from the classical EHESS position – hostile to pure economic modeling and favoring an economics deeply related to other social sciences – to a more understanding position. This evolution was probably due to long conversations with Serge-Christophe Kolm (who recalls that he had a hard time convincing Touraine of the legitimacy of pure mainstream economics).

Touraine thus offered a balanced position in his report, starting with a very classic introduction in favor of integrating of economics with the social sciences but quickly offering a place for more theoretical studies.

“There is no way to develop social sciences of change if we do not associate them with economic analysis. [...] All experts consulted were hostile to the idea of creating an integrated package called Economics. [...] Economics must be developed in close relation with all social sciences [...] but I must add immediately that such orientation supposes at the same time the presence of what I shall call a theoretical level firmly organized around formalization ability. It is easy, and it would be disastrous to get caught up in the debate between supporters and opponents of modeling, between theorists and empiricists. Wisdom is to say that the only solution is to move in both directions in the same time”.

He added an argument that had an ulterior impact on recruitment policy in economics. Economics should meet with international recognition: “I would add that in this area as much and even more than in others, the development of our research must get through a highly
intensified internationalization of the School.” Finally, Touraine concluded in favor of a strong recruitment policy in economics at the EHESS.

32 Touraine’s report was discussed during the March 11, 1976 scientific council of the EHESS. Touraine noted two possible directions, the development “of a center of formalization (around Kolm)” and “the merger of economists in social science research centers”. In the following discussion, the president Le Goff gave a few names of potential hires: Lionel Stoléru, Louis Puiseux, and Jacques Attali. Although quite different in their academic profiles and their economic doctrine (Stoléru did his PhD with Kenneth Arrow in the sixties, the second with Rouquet La Garrigue at EHESS in 1973, and Attali was to complete a State PhD in 1979 with Alain Cotta), these three economists had in common their involvement, even in the mid 1970s, with political and economic affairs rather than classical academic economic research. Stoléru was then a political adviser for President Giscard, Puiseux was an EDF economist and Attali was member of the Conseil d’État. In 1974, Attali and Marc Guillaume published an essay called L’antiéconomique which fiercely criticized the abstraction of economic theories, whether marginalist or Keynesian. The essay came in favor of empirical research and the merging of economics into a broader social sciences scheme. This work seems to have made a strong impression on many EHESS scholars. The discussion that followed was mainly divided on the possibility of reinforcing Kolm’s type of economics, or of attracting Attali.

Hence, Touraine said that other names than those proposed by the president could be added. “He notes many young persons around Kolm”17. Replying, C. Sautter “thinks [also] of young concrete Marxists”, probably referring to the nascent Regulation School. He also added that for him “the problem of Attali has been widely commented”. He recommended “that one or two young people should be affected to Kolm and Attali to be the counterpart”. Godelier insisted also on the importance of the School’s involvement in economics criticism, while Barbut, a mathematician, replied that the only direction clearly identified was that of Kolm. The opportunity of progressing simultaneously on both fronts was also criticized by Henri Hécaen, a biologist.

33 During the discussion, reference to an international audience was made several times. With Touraine, the president Le Goff insisted on the importance of an international audience, also stressing the importance of consulting foreign specialists. We don’t know how important this advice was in changing’s Le Goff mind about what kind of economists to hire first. But we do know about mainstream economists’ efforts to change Le Goff’s mind about Attali.

“I was in a car with Le Goff. He asked: ‘Attali? What do you think of him?’, it was the Attali of that time. He saw I was hesitating … He told me: ‘You mean that it’s not really serious?’ – ‘Well, if that’s you who say so…!’”18.

34 At the first “election” of 1977, there were two economist candidates: Georges de Menil and Yves Balasko. De Menil was a macroeconomist who started work for his PhD (MIT) on bargaining models in the labor market and on price-wage dynamics. After his return from the U.S., he contributed to macroeconometric models of prevision at the Insee. Balasko, a mathematician, completed a State PhD in mathematics on general equilibrium. In fact, Kolm did intervene in order to convince the former, if not also the latter, to apply. Although Georges de Menil could have been considered as much more theoretical in his approach than the usual type of economist represented at the EHESS, Kolm had the skills to present him in terms that both economists and non-economists at the EHESS could hear. Kolm explained:

“The aim is not to build in isolation the best economics department possible; but to start with what is the School: a set of social sciences that desire to establish strong interactions between one another.

Economic works are largely divided between theoretical and empirical works – and relations with other disciplines exist at both levels. But considering the School and its people, it is the works of the second type that are in direct connection with other social disciplines (history, sociology, anthropology) that should be put forward. Since our resources are limited, we must strive to develop by starting with economic works that have links with other works in social sciences.

Mr. Kolm exposes the merits of both economist candidates. Mr. Balasko is primarily a theoretician and G. de Menil represents the empiricist tendency.”20
36 During the debate, at least 10 persons publicly supported Georges de Menil. Although some law faculty economists like Aujac and Coutin supported other candidates, and others such as Weilfer, Barrère remained silent, most of the economists present in the assembly supported him, especially the theoretical engineer-economists like Gruson, Malinvaud, and Kolm. Others, like Bettelheim, Pierrat, Benard, and Sautter, who, although not very favorable to de Menil’s neoclassical macroeconomics, also supported him, seeing in his recruitment a way of saving their discipline. Crucially, this coalition counted both powerful and prestigious historians (the president Le Goff, and the future president François Furet) and notable sociologists (Aron, Touraine). The election was thus rather easily won for de Menil, who received 40 votes out of 70.

37 Although the election of Georges de Menil opened a new era in the recruitment of economists, it did not mean that recruitment of neoclassical economists suddenly became easy. Six months later, Jacques Melitz, an economist with a profile quite similar to that of Menu de Menil was candidate, publicly supported by Kolm, Sautter and Gruson. But he collected only 4 votes and Roger Guesnerie, supported by Kolm, Malinvaud and Gruson, did not get any. Roger Guesnerie was finally elected two years later at the fifth election, with the support (if we sum up support in the archives) of Kolm, Malinvaud, Gruson, Menu de Menil, Benard and the historian Morazé. Kolm explains that after hiring a macroeconomist, his objective was to hire a microeconomist (interview). He recalls that in order to convince his colleagues, he told them: “Look! EPHE missed Léon Walras. EHESS is going to miss Roger Guesnerie. Don’t repeat the error made in the 19th century’s” (interview). Although he had the support of the electoral commission, he was defeated on March 3, 1979, by Emile Poulat, a historian and sociologist of religion.

38 An initiative from the turn of the eighties that favored the economists’ development was the instating of EHESS branches in province regions, particularly in Marseille and Toulouse. The tabula rasa nature of this plan to develop economics along with other disciplines was favorable for the recruitment of economists. Moreover, although it is quite rare in the history of EHESS, open positions were based both on a location and a discipline. This extension contributed to the early 1980s recruitment of Jean-Jacques Laffont (1981), Alan Kirman (1982) and Louis-André Gérard Varet (1984), and thus enabled an increase in size of the base of “econometricians”, helping that group to acquire the monopoly of representing the economists as a whole.

39 Finally, more so than the election of de Menil, Guesnerie’s recruitment greatly encouraged the development of economics at EHESS thanks to the latter’s qualities of “scientific entrepreneurship” (Kolm, interview). In the early 1980s, Guesnerie became director of the “Centre d’Études Quantitatives Comparatives”, an ancestor of the Delta research center. In addition, upon arrival, he carried out major reforms of the Master and PhD programs in Economics.

40 Guesnerie was also greatly helped in his project by the arrival of François Bourguignon (elected in 12/1983) who offered a more applied and empirical version of mainstream economics. The tandem they created, plus their PhD students all combined to form a new generation. Beyond their local impact on the EHESS they had also a significant impact on the discipline more globally. Until the 1970s, mainstream economics were mainly represented by the engineer-economist tradition, and engineer-economists were present in engineering schools (École des ponts, Ensae, Polytechnique, École des mines, and, to a certain extent, in
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some CNRS research centers like the CEPREMAP). Most of the time, they did not have PhDs themselves, nor PhD students, and thus had little impact on the definition of the discipline and of its canon. The arrival of these engineer-economists at the EHESS along with the construction of a renowned PhD program gave them access to PhD students, and contributed to the redefinition of the canon.

3.3. The consolidation of the group around the recruitment of economists

When we put together the different elements of this change we can measure its great contingency. What also becomes clear is that it cannot be reduced to a mere declination of a general trend.

In order to understand this change, we must remind ourselves that a realist, objective and exogenous measure of quality does not exist per se (though such a supposition is often made in papers dealing with economics of higher education). We admit that an individual may be able to rank the work of his or her colleague through a personal evaluation, but, as Arrow has shown, most generally the aggregation of individual preferences does not lead to a collective transitive order. Moreover, as the cost of evaluation is high, rather than reading the entire work of all the candidates and comparing them amongst one another, scholars take into account the judgment of people they consider. Therefore, preferences are highly interdependent. This general statement is useful in order to understand what happens when an anthropologist or a historian has to evaluate an economist. Evaluating economists through reading may be very costly. For instance, let us imagine a historian during the 1970s opening Guesnerie’s article “Pareto’s Optimality in non Convex Economies” (Guesnerie, 1975), probably his most famous paper while candidate (studying the existence and properties of market equilibrium in non-classical non-convex economies thanks to the very novel mathematical concept of the “cone of interior displacements”). The historian would be largely left in the dark. As such, an historian told us that “the problem with economists at the EHESS is that I don’t understand them! I am incapable of reading them!” (informal conversation). If they rely on their sole judgment of publications, non-economists will probably prefer evaluating economics that is at least for them readable if not useful for fueling their own research. But on the other hand, if evaluating economists is too costly, non-economists will rely on existing rankings and on the advice of people they consider as legitimate. The limit of developing a very separate body of economists is that it can raise the question of “why hire (unreadable) economists on the basis of international rankings rather than (as unreadable) mathematicians (although potentially even more prestigious)?”. Therefore, while individual judgments value social-science and empirical economists, international hierarchies value mainstream economics, and advice will depend on whom they will trust. Hence, the rise and reproduction of mainstream economics at the EHESS is far from being evident.

Let us go back to the 1976 turn. Several factors were in favor of this change. First, the law faculty economists had on average little prestige. They were complaining about the students’ skill level but they themselves were not selective, accepting all of the students who applied from third world countries, students often inclined to study (and denounce) neocolonialism. The fact that joint professorships became difficult helped to encourage change since it dried this source of reproduction at the turn of the 70s. Moreover, the law faculty professors (Piatier, Rouquet La Garrigue, Aujac, Weiller), although linked with social scientists especially in PhD juries, were linked rather to geographers of little influence at the EHESS, or to sociologists of little prestige like Jacques Vernant, Pierre Marthelot or Henri Desroche, and not very much to more prestigious sociologists (Touraine, Bourdieu), or to key historians who governed the institution. Some social science economists like Bettelheim, Sachs or even Fourastié were probably more prestigious, but not well-linked to the economic discipline and could provide few economists’ names to hire. Therefore the situation was favorable for Kolm, giving him great influential power (Kolm was the “mentor” of the new generation according to Bourguignon and Guesnerie, 1996). Kolm was all the more influential given that he was not just a mathematical economist modeling justice but also a very eclectic and complex
intellectual, interested in religion, especially Buddhism, history and philosophy. He tried to build bridges with historians, writing several articles in *Annales*, the famous historical journal published by the EHESS, in order to dispel misconceptions about economics (Kolm, 1975) or to warn historians about “logical flows” in Marxist and Regulationist conceptions of economic crises (Kolm, 1985). Kolm had therefore an essential role in convincing the School, especially its bureau, to switch from its heterodox inclinations (particularly Attali) to mainstream economics, and to attract candidates. But the change did not finally rest on much. Had Sautter been a little more influential in 1976, Kolm a little less, things could have developed very differently. The EHESS could have have become an institution hosting the “young concrete Marxists” of the Regulation School. Boyer was elected in 1983 with letters of support from Pierre Bourdieu and Jean-Claude Perrot (a historian) but probably with no public support from economists. As an economist said: “I guess the economists were reluctant to hire Boyer, but they had to think they could not resist someone that everyone wants”. Although Boyer got in, several well known contributors to the Regulation School or the Convention School (for instance Lipietz, Salais, Chavance) were not elected. The same phenomenon occurred at the end of the period when another heterodox was elected (graph 7). Apart from Boyer, economists did not support the candidate.

*Graph 7. Election of a mainstream economist (candidate435) in the mid-1990s and election of a heterodox (candidate1601) in the mid-2000s.*

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3.4 The mobilization of international capital by neoclassical economists against multidisciplinary legitimacy

The renewal of the 1980s created a united group of economists sharing roughly the same views on what was good and what was not in economics. After the tipping point of the late 1970s, a phenomenon of path dependency emerged. Once formed and sufficiently numerous, the new group acquired the monopoly on advising non-economists about what kind of economist to recruit. Nevertheless this was not enough to make reproduction easy.

The first element was the decline of relations between economics and other social sciences. As shown by graph 8, a sharp drop of interdisciplinary invitations occurred for economics
PhDs between the 1970s and the 1990s. This decline is much more pronounced than the general trend. Moreover, economists were rarely invited by other disciplines (graph 9), and among declining interdisciplinary practices, economics, especially at the EHESS, was itself declining. An important factor in this evolution is the view economists hold on the expertise of other disciplines, which, if not seen as inferior and unscientific as many economists believe (Lazear, 2000), is at least irrelevant for certifying knowledge in a highly structured job market. This tendency towards closure was not mitigated by the extension of economics beyond its traditional domain of prices and revenues, especially in social (social mobility, social norms, peer effects) and historical matters. But the closure was also favored by the 1970s momentum of other disciplines that abandoned domains like quantitative and economic history, macro and quantitative sociology, and economic anthropology where they could build bridges with economics (Godechot, 2011). The critical turn of the eighties with its emphasis on deconstruction, micro descriptions, qualitative approaches to social phenomena, and its cautiousness about macro-theory all contributed to deepen the gap between economics and non-economics social sciences, but also to abandon territory to economists’ domination.

Graph 8. Interdisciplinary invitations in economics and other social sciences PhDs.

Graph 9. Share of different disciplines among interdisciplinary invitations.
The vanishing intellectual bridges were not a basis for organizing reproduction. How did economists manage to convince their colleagues to continue hiring economists? One strategy, which we have already remarked upon, was to exhibit signs of prestige, especially international prestige, in order to impress other disciplines. The use of international capital is one of the basic strategies in order to manage change in a field (Dezalay, Garth, 2002, Dezalay, 2004; Boyer, 2003). In order to understand this change we must not forget that economics differs from other social sciences by the degree of hierarchization, the degree of internationalization, and the degree of domination of English over other languages. In economics the difference between a well-known work and an unknown work will be much larger (for instance in terms of citations) than in history, anthropology or sociology. Similarly, it will be much more internationalized and non-English work will be much less visible. The French non-economic social sciences, quite prestigious in the sixties and seventies (see Braudel, Lévi-Strauss, Barthes, Touraine, or Bourdieu), did not as urgently need to be published in English-language journals since scholars in the world in those disciplines would either read French or get the work translated. But at the same time, non-economic disciplines did not ignore the economic form of hierarchization (similar in the natural sciences) and were favorable of adding this general form of prestige to the institution. Although in history, sociology and anthropology, writing articles in top-ranked English-language journals was not as highly valued as, for example, writing books in French, one could accept English articles as a general equivalent of quality in evaluating other foreign and distant disciplines like economics.

We can find symptoms of the role of international capital in Table 1. It is not that support letters for economists come more from outside France, but rather that they come much more from scholars working in English-speaking countries (USA, UK, Australia, New Zealand) with 24% for economics against 15% for other disciplines on average and that they come much less from non English-speaking Europe and from the rest of the world.

<table>
<thead>
<tr>
<th>Table 1. Origins of support letters in candidates’ disciplines</th>
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<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Economics</td>
</tr>
<tr>
<td>History</td>
</tr>
<tr>
<td>Sociology</td>
</tr>
<tr>
<td>Anthropology</td>
</tr>
<tr>
<td>Other Disciplines</td>
</tr>
<tr>
<td>All</td>
</tr>
<tr>
<td>p-value for the difference economists versus other disciplines</td>
</tr>
</tbody>
</table>

The differences between economics and other disciplines are even stronger if we focus on the 1976-1990 period when the change we are studying here occurred. Support letters for economists came twice as more frequently from Anglo-Saxon world than those for non-economists (21% against 10%). Differences are even more striking if we look at names involved in support, with several Nobel Prize-winners (or future Nobel Prize-winners) such as Kenneth Arrow, Robert Solow, Franco Modigliani, Armantya Sen, and Paul Krugman.

3.5. Building political coalitions by a new reciprocity strategy

International prestige did play a role, but it was not sufficient. The other thing economists managed to do was to build successful coalitions during the electoral process. First, before elections, they would initiate certain candidatures, discouraging others or organizing waiting lists and setting priorities. The group of economists organized an informal voting procedure.
in order to decide among themselves which candidate they will support. Second, they needed to influence the president of the school in order to get the crucial support of the bureau in the electoral commission. Third, they built a coalition in the assembly in order to support their candidates *viva voce* and positively influence their colleagues.

Through their voting procedure and their unified paradigm, economists appeared as very united. In a general assembly, they would concentrate their public supports in favor of economists that were top ranked by the electoral commission: 53% of the 154 supports of economists for economist candidates were concentrated on candidates top-ranked by the electoral commission, whereas the proportion of the supports of anthropologists to top-ranked anthropologists was only of 28% (table 2, column 1).

**Table 2. Concentration and reciprocity of the viva-voce supports during the general assembly**

<table>
<thead>
<tr>
<th>Discipline</th>
<th>1. Concentration on top ranked disciplinary candidates</th>
<th>2. Reciprocity with other disciplines</th>
<th>3. Concentration on top ranked non-disciplinary candidates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economists</td>
<td>%</td>
<td>N (all)</td>
<td>%</td>
</tr>
<tr>
<td>Including</td>
<td></td>
<td></td>
<td>N (all)</td>
</tr>
<tr>
<td>Mainstream</td>
<td>53%</td>
<td>154</td>
<td>13.6%</td>
</tr>
<tr>
<td>Economists</td>
<td></td>
<td>557</td>
<td>48%</td>
</tr>
<tr>
<td>Anthropologists</td>
<td>28%</td>
<td>441</td>
<td>10.7%</td>
</tr>
<tr>
<td>Historians</td>
<td>33%</td>
<td>929</td>
<td>12.6%</td>
</tr>
<tr>
<td>Sociologists</td>
<td>36%</td>
<td>262</td>
<td>11.0%</td>
</tr>
<tr>
<td>All 4</td>
<td>37%</td>
<td>1786</td>
<td>11.8%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Population</th>
<th>Number of supports for disciplinary candidates</th>
<th>Number of distinct couples</th>
<th>Number of supports for non disciplinary candidates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(disciplinary-non disciplinary)</td>
<td>Co-supporting the same candidate</td>
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Concentrating votes was not enough. Although one of the “big four” disciplines, in 2005, economists remained the smallest of the four with 10% of the votes, while historians had 40% of the votes, anthropologists 18%, and sociologists 13%. Therefore, it was important to build coalitions of supports with members of other disciplines, especially historians, in order to gather a majority. “Yes, generally there are always at least two non-economists who speak. It is a general rule. […] Yes… it involves prior discussions with colleagues” (Economist, interview).

Graph 7 shows an election during the mid-1990s of a mainstream economist (candidate 435) whose work was very theoretical. He got the support of Bourguignon, Demange, Kolm, Gérard-Varet, Guesnerie and also of two historians, Hervé Le Bras (a historical demographer), Bernad Lepetit, and a political scientist, Pierre Rosanvallon. It is difficult to describe what kind of exchange really took place among those coalitions. We must not underestimate the intellectual aspect of the relation. When we examine the non-economists who supported the most economist candidates (in decreasing order: Pierre-Michel Menger, Pierre Rosanvallon, Patrick Fridenson, Jean-Yves Grenier, Hervé Le Bras, Gilles Postel-Vinay, Pierre Rosenstiehl), we find a sociologist very much inspired by microeconomics, several economic historians, a mathematician, and a political scientists. Roots of intellectual interest are there, but they are probably redoubled by other networks, by intellectual and political think tanks, by a shared alumni school, by presence on the same campus, or finally, by reciprocity and exchange of supports in the assembly. Hence in the former example (graph 7), we see that in the same election where Lepetit (a historian) publicly supported an economist supported by Guesnerie, the latter supported an historian supported by the former. Do we have, in this form of reciprocity, an index of the instrumental dimension of these exchanges?
Although supports during elections do not seem at first glance to look like a systematic “tit for tat” political transaction (“I support yours, you support mine”), we do find a significant level of reciprocity. Moreover, economists tend to reciprocate more than scholars in other disciplines. 15% of the support of mainstream economists for non-economist candidates would go to a candidate supported by some allies (i.e. by non-economists who supported an economist candidate – see table 2, column 2). This type of reciprocity (“thanking” someone from another discipline for his support for “our” candidate) was milder among other disciplines.

Moreover, when they ventured to support candidates from other disciplines, economists did not waste support for candidates that had little chance of being elected. They supported candidates who were top-ranked by the electoral commission and most generally supported by the president of the EHESS (see table 2, column 3). Supporting those popular non-economist candidates was a way of pleasing both the majority and the president and of favoring reciprocity for their own candidates.

We have thus seen that in order to survive in a rather hostile universe, economists, especially mainstream economists, developed various political strategies in order to maximize votes for their candidates.

**Conclusion: Science as politics**

Beyond the specificity of the institution studied, the EHESS, we find here some scientific processes characterized by a kind of generality. We can see that local paradigmatic change is a violent social process that breaks down the traditional reciprocity of social exchange. Asymmetric relations and exclusion are at the heart of these dynamics, and it is more about transforming existing legitimacies than settling scientific disputes. The more radical the change is, the more likely new entrants will have to build their legitimacy through some kind of detour at the borderlines of other fields in order to transform value into different forms that could make sense in other fields and, in return, support their strategy within their own field. Possession of international capital is not the least advantageous building block for the construction of robust scientific strategies.

The study also documents the fact that scientific life in general and, moreover, paradigmatic change are not only a question of truth, of evidences, and of proofs but also of politics. Evaluating, influencing, building coalitions, voting, and selecting are regular practices both within disciplines and in wider interdisciplinary arenas when articles are submitted, grants are distributed (Lamont, 2009), positions are opened (Musselin, 2005), and candidates are selected. The importance of votes or of quasi-votes enables us to view science as politics. But this brand of politics is special, as we find no left-wing axis and no natural median voter. In a context where political life is becoming more complex, multidimensional, and individualistic, understanding the complex and pure politics of science could become a model for understanding the politics of different fields and even understanding political life itself.

**Bibliographie**


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Weber Max, 1958 [1919], “Science as a Vocation”, Daedalus, 87(1), 111-134.

Notes

1 Fourcade talks of sociological economics. But hybridization involved more than just sociology (Fourcade, 2009).

2 See Mazon p. 147.

3 In the 1970s, due to their responsibilities at Insee, both Edmond Malinvaud and Claude Gruson are said to be professors off duty (« directeur d’études en congé »). Cf. EHESS Archives. Electoral Commission, 1974, “État des directeurs cumulants ou non appointés ou retraités (S situation au 31/12/1973)” ; Conseil scientifique, Alain Touraine, « Rapport au conseil scientifique sur les études d’économie à l’École des hautes études en sciences sociales », March 1976.

4 Louis-André Gérard-Varet who graduated in economics in the University of Dijon is an exception in this generation. Nevertheless, Claude d’Aspremont reminds that he spend three years at CORE in the university of Louvain that had a great influence on his work (d’Aspremont, 2004).

5 A noticeable exception is Jean-Charles Hourcade, whose repeated invitations extended to Ignacy Sachs are easily explained by the fact that Jean-Charles Hourcade completed his 3rd cycle PhD under Sachs’ supervision and got finally hired (with difficulties) at the EHESS during the 1990s, thanks to Sachs’ constant support. Another exception, more surprising, is the invitation of Jean Coussy by François Bourguignon in 1988. The student did not seem to publish or to make an academic career afterwards.

6 The EHESS is ruled by its president with the help of a “bureau” of four scholars.

7 Cf. EHESS Archives. Assemblée des enseignants, March 12, 1972. “M. Braudel reminds how difficult it is to attract valuable candidates in economics at the School, in particular because of the difficulties of setting joint appointments”.

8 Cf. “Arrêté du 16 avril 1974 relatif au doctorat de 3e cycle”.


10 In fact, a generation of politicized student in the engineering schools (Polytechnique-Ponts or Polytechnique-ENSAE) with scholars like Aglietta, Boyer, Orléan, Lipietz, Salais, Mistral contributed to develop either at the CEPREMAP or at the Insee an alternative economics at the intersection of Marx
and Keynes, both different from the neoclassic engineering tradition and from traditional economics embedded in the law faculties.

11 I found mentions of this element at the beginning of Touraine’s Report, but I have not yet found original papers containing the ministry’s refusal and reason.
13 Interview, 27 November 2009.
15 EHESS Archives. Scientific council, Minutes from the Thursday, March 11, 1976 session.
16 Not surprisingly, André Piatier wrote a rather favorable review of the essay, recalling that the authors did no more than summarize what he had been supporting throughout his whole career (Piatier, 1974).
17 Kolm was at that moment also researcher at the CEPREMAP, a research center that housed an significant number of engineering-economists, some of them well inserted inside neoclassical mathematical economics (Grandmont, Guesnerie), others building a new heterodoxy around the Regulation School (Boyer, Lipietz).
18 Economist, Interview.
19 In his interview, he explained that he thought the type of economists the EHESS needed were historian economists like “David Landes”, but unfortunately, this type did not exist in France at that time. He said that he had to take economists as they were. “The question was then whether the EHESS would hire a macroeconomist or a microeconomist. It is clear that historians want to talk to macroeconomists and not to microeconomists”. Thanks to Kolm’s brokerage, de Menil had an occasion before the election to meet the School’s president and bureau and to get their crucial support.
20 Archives of EHESS, Assemblée des enseignants, “Procès verbal de l’assemblée générale des enseignants du 16 janvier 1977”.
22 Supports are not reported for all elections.
23 Guesnerie, Interview.
25 Viva voce supports at general assemblies are not reported between 1980 and 1993. We only know the authors of letters of support sent to the electoral commission.

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Abstract / Résumé / Resumen

The paper analyses the social conditions of a disciplinary evolution and paradigmatic shift. It is based on the history of economics at the EHESS from 1948 to 2005. An analysis of the PhD committees database enables us to trace the importance and evolution of different economic paradigms within this institution. In the early eighties, the traditional
interdisciplinary humanist economics was challenged by a new generation of neoclassical engineer-economists. Far from being a mere declination of a general trend in the discipline, this paradigmatic shift was largely contingent, resting on local context and the influence of a few key persons. The exhibition of international capital and the building of political alliances within the assembly were also key elements for the change and for the survival of the new lineage in a rather hostile environment.

**Keywords**: heterodox economics, higher education institutions, neoclassical economics, France

Comment le paradigme néoclassique s’est imposé au sein d’une institution de recherche pluridisciplinaire ?

Les économistes à l’EHESS de 1948 à 2005


*Mots clés*: institution d’enseignement supérieur, économie hétérodoxe, économie néoclassique, France, B0 - General, B20 - General, B31 - Individuals, B50 - General

Como se impuso el paradigma neoclásico en el seno de una institución de investigación plurisdiclinaria? Los economistas en la EHESS de 1948 a 2005

El artículo analiza las condiciones sociales de una evolución disciplinaria y de un cambio paradigmático. Se basa en la historia de la economía llevada a cabo en la EHESS de 1948 a 2005. El análisis de una base de datos sobre los Jurados de Tesis nos permite restablecer la importancia y la evolución de los diferentes paradigmas en el seno de esta institución. En el comienzo de los años 1980, la economía tradicional, humanista e interdisciplinaria, fue reemplazada por una nueva generación de ingenieros economistas neoclásicos. Lejos de ser una consecuencia de una tendencia general de la disciplina, este cambio paradigmático fue ampliamente contingente, y reposa sobre el contexto local y la influencia de varias personas claves. La exhibición del capital internacional y la construcción de alianzas políticas en el seno de la asamblea fueron elementos claves de esta transformación y de la sobrevivencia de esta herencia en un contexto más bien hostile.

*Palabras claves*: Francia, economía heterodoxa, institución de enseñanza superior, economía neoclásica

*Code JEL*: B0 - General, B20 - General, B31 - Individuals, B50 - General