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Alain Desrosières and the Parisian Flock. Social Studies of Quantification in France since the 1970s

Emmanuel Didier*

Abstract: »Alain Desrosières und die Pariser Gruppe. Die Social Studies der Quantifizierung in Frankreich seit den 1970ern«. Alain Desrosières has played a central role in the French intellectual scene from the 1980s to today for his theories of quantification. In this article, I trace his career and that of his contemporary Parisian scene in three steps: first, the period when he was associated to Pierre Bourdieu; second, the one when he became part of what we propose to call a flock of scholars all working on the qualification of reality; and finally, the one when Desrosières was associated with the Centre Koyré d'histoire des sciences. Finally, we use statistics to analyze the extent of the international reception of his work.

Keywords: Desrosières, Bourdieu, INSEE, quantification, statistics, reality, politics, qualification, conventionalists.

1. Introduction

Alain Desrosières died on 15 February 2013. He was a central figure in the French intellectual generation following the likes of Bourdieu, Deleuze and Foucault, and whose importance has begun to be recognized throughout the world in the past decade. Recounting his career permits us to write the intellectual and social history of his generation – that is to say, presenting different types of groups of which this singular personage was a member. We will do it from his point of view, that of quantification, which is of capital importance, for no social science worthy of the name can develop without some conception of statistics.

Desrosières' originality was owing to the fact that he was far from being the simple "quantitativist" in this complex swirl of intellectual currents. Beside his impressive technical erudition, he developed what is becoming a veritable scholarly discipline in its own right – the social history of quantification – which takes measurement and quantification practices as the very object of

This paper is an adaptation of the introduction that I wrote for the last book of Alain Desrosières (2014) that was published after his death.

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inquiry. Indeed, the world in which we live is pervaded by quantities that are produced in a specific fashion and have their own effects and uses. Desrosières showed how they could be envisaged as full-fledged social objects. And Alain Desrosières always conceived his scholarly activity as having political relevance. His intellectual contribution was ever marked by a great generosity and mindful caution with respect to his ideological presuppositions as well as their social effects. His qualities flourished in the soil of quantities.

And so Desrosières' contribution would seem to have been to demonstrate – throughout his life and in three different ways, with Bourdieu for one, with those disciples and successors who were also interested in the qualities of our reality, for another, and finally with his colleagues at the Koyré Center – the importance, the depth, and the amplitude of social inquiries into quantification.

2. The Bourdieu Period: Nomenclature and Social Representations

Alain Desrosières was born 18 April 1940 in Lyon. Admitted to both the École Normale Supérieure and the École Polytechnique in the same year, he eventually opted for the latter (class of 1960). Deeply concerned with matters political and those touching on citizenry, he then chose ENSAE, which led to his becoming the administrator of INSEE (1965) owing to the fact that here was instruction in the social sciences, in contrast to other applied-science schools at the École Polytechnique.² He was trained in sociology by Pierre Bourdieu himself, who taught here from 1963 to 1965 (Seibel 2004). In the 1950s, in Algeria, Bourdieu had made the acquaintance of statisticians from INSEE, who introduced him to the national statistical system. It was this encounter of a "literary" sociologist with functionaries who were trained engineers that strongly influenced Bourdieu's work and perforce his teaching in two different ways (Desrosières 2003).

On the one hand, extending the methods used by Durkheim in his work *Suicide* (1897, 1951), Bourdieu used statistics as an instrument of empirical proof. Despite the war, he conducted several studies in Algeria with his administrative friends from INSEE (1963). Then during the 1960s he worked on social inequalities in mainland France, reclassified as a mechanism of domination (Darras 1966). And during the 1970s he was inspired by methods of "correspondence analysis," invented by Jean-Paul Benzécri and Brigitte Cordier-Escofier, so as to visually represent his field theory and that of social capital, in particular in *Distinction* (Bourdieu 1979, 1984, Blasius et al. 2008 for its English-speaking reception).

² The French INSEE is the equivalent to the American Census Bureau.

On the other hand, in following another strand of the Durkheimian tradition, which for its part arose from neo-Kantianism (Durkheim and Mauss 1903), Bourdieu exhorted the young statisticians grouped around him to take seriously the "requirement of reflexivity" critique by taking statistical categories themselves as objects of study. Scholarly production, he said, is also a social production, and as such it interests sociology. Bourdieu was thus fain to take up Wittgenstein's metaphor of glasses that one must remove from one's nose so as to observe them.

But when you remove your glasses your vision blurs. Desrosières later wrote, in 2003, that these two teachings - using statistics empirically while at the same time reflexively studying them - were difficult to reconcile. But he succeeded in achieving this tour de force in reworking the nomenclature of socio-professional categories (CSP then PCS in 1982). This had been initially developed in France after the Second World War by Jean Porte, administrator of INSEE. It became central in the national statistical apparatus, for it furnished the principal representation of French society in its entirety, still very strongly influenced by conceptions that were both classist and industrial after the war. But by the early 1970s, as society itself changed, it had grown dated. Desrosières worked with Laurent Thévenot, another administrator of INSEE, ten years younger, in the group that from 1978 to 1981 was officially charged with reworking the nomenclature. They were behind the principal changes. The two authors distanced themselves from the "optimist scientism" of the generation of administrators that had preceded them and they took up the dissent "that had agitated a highly politicized youth in the wake of the Algerian War (ending in 1962) and in May 1968" (Amossé 2014).

Rethinking the paradigmatic tool by which France represented herself to herself implied once more taking up the list of sub-categories here and reworking the internal organization of categories in terms of their varying hierarchical levels. Desrosières had the idea - not to be expected from an engineer - of carrying out these modifications by focusing on the history of nomenclature, which called into question the conventional reasoning as concerned the CSP. Drawing also on the thought of Mauss and Durkheim regarding classifications and pursued by Bourdieu, he showed that this nomenclature was the impure product of a conjunction between "natural classifications" and "logical classifications." This is to say that it was an arrangement between, on the one hand, "typologies" of established *métiers* within the social reality of work, and on the other hand of certain principals of logical classifications claiming application to all of society and inherited from past struggles; neither did the typologies nor the principals take precedence but were placed on an equal footing. In particular, in the nineteenth century, there arose the difference between employers and employees; then, in the 1930s, the level of qualification, sanctioned by one's level of diploma, which gradually remodeled the representations of work. Neither did the nomenclature of the CSP find its coherence through logical deduction nor by induction from the *métiers* actually observed; rather, it emerged from historical determinants springing from local struggles of classification, in the sense that they initially only applied to a small number of categories. And Desrosières and Thévenot concluded that "the taxonomist registers the state of these struggles with deformations that depend on the position he assumes" (Desrosières and Thévenot 1979, 52).

Based on this observation that the nomenclature does not arise from a sole logical principle, the next step consists of inferring that it can only be understood as multi-dimensional. Rejecting the utopia of a "spherical" society where all the individuals are equidistant according to their own particular dimension, Desrosières and Thévenot simplified and recovered Bourdieu and his theory of total social capital divided by two – economic capital and cultural capital. French society could be approximately represented as a distribution of its diverse social categories between these two dimensions.

It was from these theoretical findings on the nature of categorical representation that Desrosières and Thévenot drew lessons with respect to a reworking of the CSP's nomenclature. For instance, categories such as artists, the clergy and teachers, which had previously been classed by the nomenclature in the grouping "others," were thus analyzed as beneficiaries of high intellectual capital but with meager incomes and hence placed in the general grouping of managers, even if they were not always employees, owing to their proximity in terms of cultural capital. They proposed creating the category of "intermediate professions."

Moreover, this bi-dimensional framing of the nomenclature had an impact on how to utilize it most profitably. In particular it was simplistic to use it as the sole scale of relations of prestige in society. Desrosières identified three main groups of users – the public statisticians with whom he worked, the university sociologists employing empirical data and private institutes – and he showed that the properties of this instrument had an impact through to the end of the statistical chain, including interpretation of the data, thus concluding that both the use of statistical instruments and their genesis deserved to be studied from a sociological perspective.

This critical work on statistical classifications might evoke the work of Aaron Cicourel and John Kitsuse (1963) which became extremely influential in in the US during the 1970s and 1980s, especially in the sociology of the left, epitomized by ethnomethodology and interactionism. They argue that official statistics produce their own categories as the result of administrative behaviors, and impose them upon the social conducts that they pretend to measure. For them, official statistics are nothing else than a "measurement by fiat," that does not account for the social process under scrutiny, but imposes its own definition. Desrosières and Thévenot discovered the work of Cicourel fairly early in the 1980s but, despite similarities, they did not buy into this argument. Their work in history and sociology of official statistics had clearly demonstrated

that, contrary to Cicourel's argument, categories were through and through penetrated by social conducts, former conflicts and interactions so much so that the State does not simply imposes his own views; it "registers" the result of past social conflicts. It makes "investments in forms" as would later Thévenot call them, in making more logically consistent categories that clearly remain "natural." This important difference, generated by the fact that Desrosières was at the same time a producer of statistics and an analyst of them, which was possible because of the specificities of INSEE compared to the Census Bureau on the one hand, and the US academic system on the other, explains why the critiques of quantification expressed by the American "qualitative sociology" never really took root in France. In France, critique of quantification always remained informed by the internal practice of statistics, and oriented towards this practice, even though at a distance that could be more or less large.

From that time on, Desrosières' work showed an enthusiasm and freedom vis-à-vis those institutions in which the work was done and where this zeal and liberty were not only much greater than what one sees today but which themselves helped to produce an atmosphere which – at INSEE in the 1970s – was exceedingly favorable to the social sciences. Testifying to this, for example, was the 1976 Vaucresson symposium entitled "Pour une Historie de la Statistiques," which resulted in the publication of two volumes that documented its proceedings (Affichard 1977, 1987) and in whose organization Desrosières played a central role. At the same time a series of works were carried out in collaboration with a group of other researchers likewise close to Bourdieu. Notable among these was Luc Boltanski, teaching at the École des Hautes Études en Sciences Sociales (EHESS), who was then writing his book Les Cadres (1982, 1987), a new and detailed study of the relation between social categories and political representation. Laurent Thévenot, for his part, was carrying out inquiries and tests on those "investments in form" which are endowed with the power of oversight in the economy and in politics (Thévenot 1983, 1984, Desrosières and Thévenot 1988). Michael Pollak, an Austrian researcher then installed in Paris, and to whose memory Desrosières dedicated La politique des grands nombres (Pollak died just a few months before the publication of the book), was investigating intellectuals and the relation between the socio-political conditions of their work and the nature of their productions. This research and the fellow feeling uniting members of this generation in the 1970s helped give birth to a new sociology interested in "économies de la grandeur" (Boltanski and Thévenot 1987, 1989), an intellectual current which in 1984 issued in a new laboratory at EHESS, namely the Groupe de Sociologie Politique et Morale (GSPM).

3. The Period of the *Groupe de Sociologie Politique et Morale* (GSPM): Qualifications

At the end of the 1980s a new way of thinking about and applying the social sciences made its appearance in France. It was within this certain intellectual complex that the social history of statistics played a central role, constituting a clear link between the various actors, in particular between members of GSPM, those of the *Centre de Sociologie de l'Innovation* (CSI) gathered around Bruno Latour and Michel Callon, and certain conventionalist economists. So as to understand the intellectual energy and fermentation of that period, I must first provide a picture of its intricacy, after which I will show Alain Desrosières' contribution.

The sociologists of GSPM sought to extend Bourdieu's research by questioning the critical role of sociology. Bourdieu viewed his discipline as an exercise in disclosure, beyond representations, of real social mechanisms like inequalities or domination. Nor did the new generation of researchers seek to practice a "critical" sociology – as Boltanski described the efforts of Bourdieu – but a sociology "of the critic," taking as its subject the activity of critiquing itself, such as practiced by the ensemble of social actors (Boltanski and Thévenot 1989; Boltanski 1990).

New socio-political conditions had made this reflexivity possible. Bourdieu had worked during the Algerian War and then under the right-wing governments of the Fifth Republic, thus always in the opposition, but the accession of François Mitterrand and the Left to power in 1981 aroused hopes that deprived his protest position of some of its urgency. The members of the GSPM, under no illusions as to the achievements of the left-wing government, took it upon themselves to carry out more theoretical research on social criticism, whether of academic provenance or not. They obviously did not desist from critical use of the social sciences, but they took the inherent risk in this type of inquiry by temporarily pushing to the background their direct exercise so as to produce a better theoretical understanding.

And so a link was rapidly established between that conception of sociology and the anthropological study of science which Bruno Latour and Michel Callon were importing from the Anglo-Saxon countries and developing at the *École des Mines de Paris* at the time. They had placed the analysis of scientific controversies at the heart of their method (Callon and Latour 1991). Instead of proceeding to a critique of sources so as to identify the "true" innovators or the "true" determining factors of the discoveries, as did the history of science and traditional epistemology, the analysis of controversies was for them a method known as "symmetrical," allowing for the study of the process by which both human and non-human actors express the qualities of the entities hereby engaged.

Finally the GSPM (principally via Laurent Thévenot and Alain Desrosières) and the CSI (via Michel Callon) were also linked to "conventionalist" economists grouped around Robert Salais, André Orléan, François Eymard-Duvernay, Olivier Favereau and Jean-Pierre Dupuy. These economists came also from the INSEE. They took part in the research on statistical categorization, and were applying the results to economical questions. For example, Eymard-Duvernay worked on the diversity of the firms within a branch, according to their goal and management logic. Another example: Robert Salais began a history of the concept and categorization of unemployment. They were looking for a re-articulation of standard micro-economic theory on this ground.

The work of the researchers of these three groups thus covered both ordinary persons and scholars; they observed how, together, in situations of uncertainty, they were able to establish "qualifying" events for those social entities constituting reality. Hence, and contrary to Bourdieu's proposals, they were interested in explicit processes of the production of reality and so did not conceive them as practices disclosing a veiled reality.

Apart from a number of shared intellectual interests and their generational proximity (the majority of them were born between 1940 and 1950), these researchers had much else in common. At first, in the 1990s, they saw each other regularly, in the professional seminars or in the "private" salons that some of them held, thus resuscitating a kind of eighteenth-century sociability this milieu benefiting substantially from that sociability which only Paris makes possible. Then they conceived of themselves as heterodox. They felt they constituted an alternative to mainstream sociology, which at the time, would have been for one part methodological individualism, epitomized by Raymond Boudon; the study of organizations exemplified by Michel Crozier and finally the Bourdieusians who were being officialized in the academic institution. To escape from these three pillars, they had little respect for disciplinary boundaries, aided in this by the fact, with just a few exceptions, that they were not hired by universities. Those who were not administrators of INSEE (like Desrosières) or researchers at EHESS (like Boltanski) taught at those typically French grandes écoles - Latour and Callon at the École des Mines, the conventionalists at the others. This allowed each of them to enrich his research by crossing sociology, political science, economics, law, and again anthropology, with very few constraints.

Among these disciplines, philosophy had been particularly mobilized by that intellectual complex – but in a radically different fashion from the ways in which it was habitually utilized at the time in the social sciences. At GSPM, instead of placing it in a superior position vis-à-vis sociology, which would have little more to offer than empiricism, the researchers recognized the shared origin of the two disciplines and placed them on an equal footing. Philosophy was paradigmatic in its construction of a framework that Boltanski and Thévenot called "the model of cities" (Boltanski and Thévenot 1987, 2006). Ac-

cording to them, philosophers produce systems of justice that are internally coherent, explicit within their own rules, and which aim at universality. The systems that become the most legitimate permit sociologists to make explicit the orders of justice socially observed, and this is why they constitute grammars to which the actors must conform, even implicitly, when they justify themselves. The project thus consisted of practicing a sociology not of philosophers but of philosophy itself – a sociology interested in the social effects of philosophical productions.

For his part, Bruno Latour also made great use of philosophy, but in another fashion. At that time he asked if those characteristics which appeared during the controversies had previously belonged to humans and non-humans who were involved in them, the controversy thus presenting an occasion by which to discover that which previously existed (realism); or, to the contrary, if these characteristics did not exist prior to a controversy that was occasion by which they were then produced by humans (constructivism). Latour insisted on the fact that these two philosophical options had their virtue, and he sought a philosophical theory permitting him to move beyond this alternative (Latour 1996). By mobilizing in particular the work of Gilles Deleuze, Isabelle Stengers, and the American pragmatists (notably William James), Latour gradually produced an ontology all his own which enjoys the success that it does today (Latour 1991, 1993). Latour did not therefore make philosophy the object of another discipline but practiced it as a discipline by which he constructed responses to questions posed by his empirical inquiries; he thus laid claim in part to the role of philosopher.

The social history of statistics constituted an essential link between the sociology of science, the economics of conventions and the sociology of criticism. These links were constituted, for instance, by the fact that Alain Desrosières, while remaining at INSEE (where in 1987 he was appointed to CREST, the institute's research laboratory), was also a full-fledged member of GSPM, and that in 1993 he published *La politique des grands nombres: Une histoire de la raison statistique* in the collection *Anthropologie des sciences et des techniques* supervised by Bruno Latour and Michel Callon at Editions La Découverte.

This book is his masterpiece of that decade. It covers the period from the seventeenth to the mid-twentieth century. The subjects treated here largely go beyond mere nomenclature. One finds chapters on survey techniques, econometrics, correlation analyses, or yet again various national administrative traditions in terms of collecting information and quantification. In each case Desrosières expands the arguments that he had built on focusing on nomenclatures. He shows that all the statistical instruments have a twofold nature, contradictory and irreconcilable, being simultaneously both "logical" and "natural," at one and the same time constructed and real; all of the statistical data is artificial because it is produced by humans while yet being real because it describes the world as it is.

Then he made another detour via history in his long-term description of how the focusing of these tools has been accompanied by a dual task – the statistical tools being brought into line with other elements present in the society to which they lent themselves while at the same time discerning usages to which they could be put. The reader learns how the actors arrived at practicable solutions to the contradiction inherent in statistics and ultimately succeeded in "doing things that hold together" (Desrosières 1993, 17). Desrosières shows how this work, ensuring that very diverse elements should converge and congeal, amounts to expressing those characteristics of each element that are compatible with the others. And so he participated in investigatory work on how humans specify the qualities of their reality. But his own contribution was to show how certain of these *qualities* were *quantities*. He thus delivered the continent of quantification to this collective enterprise preoccupied with surveying the horizon of qualification.

He also mobilized philosophy (Daston 2000), but in way that was different from GSPM or CSI. He took up once more the alternative of realism versus constructivism formulated by Latour, but did not attempt to produce an alternative philosophy reconciling two antagonistic conceptions. This man who spent time every day with statisticians had observed that they defended arguments apropos of statistics that were sometimes realist, sometimes constructivist, and that they felt no crying need for personal coherence or consistency. Their practical epistemology *depended on the situation*. For the actors, he remarked, "the choice between the two postures, realist and conventionalist, is not an existential choice engaging the person in a committed fashion" (Desrosières 2008b, 138). There was no compelling reason why the actors should *not* have altered their stance. This is why Desrosières insisted that their epistemology itself be construed as an object of sociological inquiry, which on the one hand would cover situations where they adopt one or the other metaphysical system, and, on the other hand, covering those figures of compromise between the two:

The fact of taking seriously both realist and non-realist attitudes in relation to statistical techniques allows for the description of more varied situations, or, in any event, to recount more unexpected stories that do not take the form of a narrative privileging one or the other of these standpoints (Desrosières 1993, 10).

All of these works formed a constellation that was not unified. To try it today, moreover, would be to risk failure, as this perspective would repel many of them. The label of "pragmatic sociology" that is sometimes used today is deceptive because anachronistic (back then the term was not used) and implies inadequate political presuppositions. Desrosières never described himself in this way. What's more, Latour wrote about the differences between the work of CSI and that of GSPM (Latour 2009) and Boltanski did a sociological analysis of the effects of the theory of the actor network of CSI, from which he thus implicitly distanced himself (Boltanski and Chiapello 1999, 2005). Perhaps the

constraints imposed on the collective lifestyle of the intellectuals at the end of the century rendered null and void the old model of the "school of thought."

Yet there was indeed a collective, and to conclude this section we might attempt to specify its properties. With all due respect to my predecessors, I should like to compare them to those flocks of birds that have impassioned ecologists as of late - no mockery here, just a heuristic device to describe new forms of sociability. These flocks are associations of several different species (just as the individuals in question here were from different laboratories and disciplines), composed on average of some twenty persons who move about together in search of food and to protect themselves against predators. These fluid associations are based on complementary characters (differences among species) but also supplementary ones (similarities among species). They generally include a nucleus of "leaders" who were there at its inception and were influential in launching it on a certain course. The relations, hierarchized, between individuals in flocks are complex and range from the tolerated plundering of aliment to relations of affinity. These flocks break down at end of a period that can range from five minutes to one day, hardly a negligible period in the life of a sparrow, and can sometimes reform from day to day during a season. It seems to me that the points in common with the sociability of that certain intellectual complex are more than apparent (Sridhar et al. 2009).

The fact that his flock was Parisian did not severed Desrosières from foreign contacts, quite on the contrary. During the second half of the 1980s, he became close to the "Bielefeld group" composed mainly historians of science. They had been invited for the academic 1982 year by Lorenz Krüger in Bielefeld, to establish together whether or not the apparition of probability was a revolution in the sense defined by Thomas Kuhn (1996). The answer is in the landmark *History of the probabilistic revolution*. Desrosières did not know them at the time, but immediately caught up with the group and became friend with many of them (especially with Gerd Gigerenzer, Lorraine Daston, Ted Porter and later on Mary Morgan). Their historical perspective on science had a very important influence on the way he writes about statistics. As well, he adopted their constant requirement to be at the same time internalist and externalist, that is to describe the inner scientific operations of statistics as well as the outer influences exerted on them (Gigerenzer et al. 1989).³

Ted Porter, in a recent conversation, told me that the Bielefeld group, being composed of historians, was anaware of the work of the sociologist Cicourel.

4. The Koyré Period: Government and Indicators

At start of the third millennium the internal links of that Parisian flock of qualification specialists, in their situation of uncertainty, began to distend. The links that Desrosières maintained with them also relaxed without there having been any real difference of opinion. He remained an associate member of GSPM and continued to publish with his friends at the Presses de l'École des Mines de Paris, but he moved closer to the Centre Koyré d'Histoire des Sciences (EHESS) of which he became a member in 2001 - but of course without leaving INSEE. One mustn't perceive this as some kind of historicist assertion. To the contrary: the final period of Alain Desrosières' scholarly life related more directly to the question of the relation between statistics and government.

The vicissitudes of public life again impacted his work. After the year 2000 it became increasingly evident that new statistical tools were spreading and circulating throughout France and the world - namely productivity indicators, quantitative targets, and all the so-called benchmarking techniques. In 2001, with promulgation of the organic law relating to finance laws (LOLF), to be definitively applied starting with the finance laws of 2006, quantitative performance indicators were implemented in all administrations, including INSEE, and accompanied by instructions that each agent give quantitative account of his activity. At the same time, criticism leveled against these tools increased. The wide use of these techniques as well as the growing success of Desrosières' writings – it has to be said – have profoundly transformed public perception of the relation between statistics and politics. Now everyone immediately perceives their enmeshment. But the word "politics" has gained a very different sense from that which was developed in La politique des grands nombres. Desrosières was interested in that difference.

Indeed, his works always proceeded from a certain political vigilance that did not then translate into engagement for a certain party. He always remained on the left, but, according to an unformal survey realized on his closest friends, never identified himself as a "gauchiste" (a radical). Already his turn to statistics upon his leaving the École Polytechnique in 1963 at twenty-three years of age, one year after the end of the Algerian War, was already informed by politics, in a way that he would explain with one of those formulas that he would laughingly utter: "Mathematics = Torture." Not because the practice of mathematics made him suffer - he excelled at it - but this was the formula's abridged version. There was a more extended version which he had in his mind: "Mathematics = École Polytechnique = French State and Army = Algerian War = Torture." It shows that he resented the political connotations of la voie royale in France at the time – mathematics as the science of the engineer and of power - and he abandoned it for the more social path that was on offer with first ENSAE and then INSEE.

During the "Bourdieu period," impregnated by Marxism, he saw politics through the lens of social categories. Reflexivity with regard to statistics allowed him to apprehend their way of disclosing the social inequalities that existed among diverse groups and of measuring the mechanisms of domination and the effects of classification resulting from these inequalities. In the period that followed, politics took on a more fundamental and structural meaning for Desrosières. As a matter of fact, in his 1993 work La Politique des grands nombres, he blended extremely different approaches, like the history of the state, that of mathematical tools, and a historical sociology of the elements of global culture. Then he showed how their slow articulation and rearrangement establish themselves as constituent parts of the institutional reality in which we live today. He described this institutionalization as "politics." In the case of surveys, for example, he explains that it is because mathematical tools have been associated with a standardized territory, with the social question, and with state action that they are entirely dependent on politics; it is inscribed in the links between these remote elements which, thus arranged, become the reality of societies themselves (Desrosières 1993, 104).

Politics with governmental connotations became the object of his analyses after the year 2000, when benchmarking tools became an inescapable development. Moreover, he entitled one of his two volumes of collected articles, appearing in 2008 with Presses de l'École des Mines, Gouverner par les nombres (while the title of the first volume, Pour une sociologie historique de la quantification, remains more in the spirit of the previous period). One finds here "five ways of articulating the state, the market, and statistics" (2008b, 9; see below, Chapter 1), thus presenting this theory with particular precision. Desrosières' point of departure is that ongoing debate ever since the eighteenth century as to the form that state intervention should take with respect to the development of markets. He distinguishes five historic configurations that link these two elements, and he notes that in each of them the state is not content just intervening but erects a system by which the economy is observed. These systems express statistical tools having different technical properties specific to each. For example, during the liberal period of the nineteenth century, the state sought to produce pure and perfect markets; to that purpose it set up a measurement system for quantities exchanged on the markets which limited the asymmetries of information among actors. Later, during the Keynesian period of the 1950s, the state established national accounting practices by which the stimulus circuits could be better monitored. Each time the methods of specific statistical observation were established by the state for the purpose of informing its intervention in the economy.

The fifth and last configuration he treats in his inquiry is neo-liberalism. It is initially characterized by a large market, a polycentric state (i.e. numerous administrative centers dispersed over its territory) and a system of statistical knowledge based on technology incentives which serve as performance indica-

tors or benchmarking. Desrosières dwelled on the analysis of that configuration in much greater detail in later papers (Desrosières 2014). It would thus appear that neoliberalism cannot be summed up merely by citing technology incentives. Desrosières was also interested in the importance of randomized testing, a method developed in all areas of public intervention and in particular with respect to developmental aid (Bardet and Cusso 2012).

We thus discover that there is another way to analyze neoliberalism apart from the economic texts followed by Michel Foucault (2004, 2007). Desrosières got very interested in this approach at the time, and also in the work of the scholars of the Department of Accounting and Finance at the London School of Economics who remained the heroes of the concept of "governance" until now (Burchill et al. 1991; Power 1997). But the statistical approach as promoted by Alain Desrosières, in particular his attention to method, allows us to give a factual description of it that has far greater precision; in other words, a description that is much more sociological as concerns both its origins and its effects than what one can read in the work of his predecessor (Jeanpierre 2006). This path blurs the watchword "reflexivity" by simply proposing that we view all statistics, whether produced by the state or not, as constituting a production that is inseparably cognitive and political, while at the same time reconnecting with an interest in the critical uses of the sociology of statistics.

It was particularly during this final period of his life that Alain Desrosières sought out interaction with young researchers. He met with them within the framework of the Pénombre association, which has brought a sense of humor to its fight against the misuse of numbers in the public space since 1993 (Association Pénombre 1999) and frequently in efforts at education, an activity that he valued enormously. He prepared and often conceived his courses in tandem, together with university friends, economic historians. It was with Michel Armatte that he gave a course in the history of statistics at ENSAE between 1991 and 2008 that permitted him to meet student administrators destined to become his colleagues at INSEE as well as the sole (or more rarely two) "free" (noncivil servant) student(s) in each graduating class who then turned to research in social science and inevitably attended this course.⁴ At EHESS, together with Amy Dahan and Michel Armatte, he led a seminar on the history of statistics in the Master program in the History of Science at the Centre Koyré; and as of 2008, within the framework of GSPM, he led a seminar entitled "The Politics of Statistics." He also gave regular talks in the seminar on the history of economic thought as organized by Annie Cot at the University Paris 1. And finally, between 1992 and 2011, even if not a university professor, he was invited to sit on twenty-one committees reviewing theses pertaining to the history of quantification.

This is how I met Alain. The professor-student relationship later turned into one of intellectual complicity and deep friendship.

Desrosières was an extremely attentive, generous and positive-minded teacher. He loved being face to face with students. Many of us have memories of our visits to office number 1001 in the INSEE tower where he worked and would receive us. He was always ready to comment on a text that had been submitted to him, not looking for faults but setting out the associations that the text inspired in him and passing on published references or a contact with a new interlocutor who he felt was pertinent. His taste for transmission gradually made of him a sort of guide for an entire generation of students interested in his work, either because they employed statistical tools or were transitioning to research on statistics, and in a variety of social science disciplines. Thus did he lay the intellectual and social foundations for a discipline – the social history of statistics – as now practiced by a large number of scholars.

However, he never really went to the trouble of institutionalizing it. INSEE let him do what he wanted mainly because he was protected by his status of "polytechnicien." This allows him to take much freedom with the kind of work which is usually expected in this institution. But he paid this freedom with a relatively slow career (he did not reach the top hierarchical levels of command), and a low level (but not an absence) of interest expressed by INSEE towards his work. In the beginning of the 2000s, he proposed to Paul Champsaur, then Director, to open a small unit dedicated to the history of statistics. He was answered "One single Desrosières if well enough here. I will not open a unit where I would get a whole bunch of little Desrosières." He did not insist, and those working with him were left scattered in many different institutions, without anywhere to unite. Here once more we have the image of the flock.

5. Reception

As Michel Armatte put it, Desrosières was *un mailleur* — "a mesher." He had the passion and the art of creating original relations between persons, between ideas, and between persons and ideas. Moreover, he did not exclude himself from this activity, gladly preserving links that had been forged long before. To be mentioned here is the fact that he very quickly renewed ties, in his own fashion, namely in preserving a great independence, with those who had remained close to Bourdieu, in becoming a member of the editorial board of the review *Genèses* from 1995 to 2008. Likewise, he never ceased to have converse with friends from GSPM, from CSI and the conventionalists.

But what about the other way around? Who was interested in *his* work? In describing Desrosières' readership, a population in its own right, the use of statistics is particularly welcome. This question gives us occasion to ourselves follow his dual lesson of recommending the *practice* of statistics – but a statistical practice that is also an exercise in writing and conducted in light of his socio-historical analysis. So it is in this spirit that we shall not here attempt to

"benchmark" him in a competition with other works or authors but to depict, through the use of numbers, the communities of which he was a member. We have focused on his book La politique des grands nombres. Published in 1993, reissued in pocket format in 2000 with a new afterword, translated into English in 1998, this book affords us the opportunity, some twenty years later, to track reception of his work. It is not enough to know that almost 6000 copies of this work have been sold to date - we also wanted to know who has used it and referenced it – and for that we employed Google Scholar. We compiled a data base for the total number of references made to La politique des grands nombres in both the French and English versions.⁵ It is evident that the Englishlanguage references are overrepresented and that a number of inescapable French-language references (and those of other languages) have been ignored (for instance Boltanski and Chiapello 1999, itself cited more than 3700 times in the database, does not appear in the cited references, though the book is in its bibliography). But we availed ourselves of this tool because it was the most exhaustive of those bibliometric databases that were easily accessible (Kosmopoulos and Pumain 2008, Jacobs 2009).

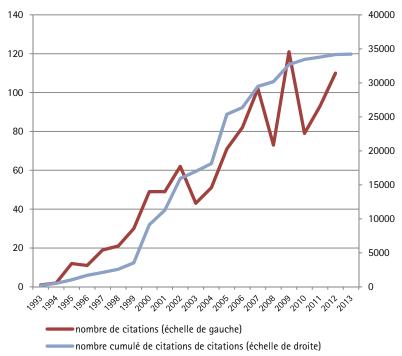
But despite these deficiencies, 1332 references, of which 1120 were usable, had cited *La politique des grands nombres*. These works constitute our corpus. With the exception of 2003, the number of citations has increased every year up until 2007, at which point it varies by some hundred citations per year. The book's success is thus not on the order of a fashion or a passing trend, being read for a brief period and then forgotten. It has instead become a classic that continues to be read and cited each year.

The notoriety of the book in a larger sense can be assessed according to the number of times that the authors who cited *La politique des grands nombres* were themselves cited – cumulatively, at the end of the period under examination, one arrives at close to 35 000 references in which a text was cited that itself cited the work (see Figure 1). Translation of the book into English evidently had an important effect on the number of second order citations. An impressive increase of such then followed and as initiated by the work of Geoffrey C. Bowker and Susan Leigh Star *Sorting Things Out* (1999), which itself is cited almost 4000 times. Then in 2005 one sees a renewed surge that is in large part due to the book having been cited by Bruno Latour in his *Reassembling the Social* (2005), he himself being cited almost 6000 times. In our corpus these two books and that of Desrosières lead the pack in terms of the most frequently cited works. But who exactly composes the readership of *La politique des grands nombres*? First of all, it is international. In our database almost half the

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references are in English; but one also finds them in German, Spanish, Portuguese, Italian, Polish, Dutch, Danish and other languages more difficult to identify. It should also be pointed out that apart from English the translation rights were sold for the Greek in 2002 and for the Spanish and German in 2003, thus showing the undeniable diffusion of this book abroad, particularly in the Anglo-Saxon world, as well as in France.

Figure 1: Number of Citations and the Number of Citations of Citations of La Politique des Grands Nombres



Furthermore, we wanted to know the disciplines of those who were citing the book. We ourselves construed a nomenclature of the disciplines of the citing authors in conformity with the theory of Desrosières - that is, by oscillating between overarching principles and those specific cases observed in the database. We finally arrived at a nomenclature of five items (as well as the five forms of state). The five disciplines citing Desrosières are general sociology, the history and sociology of statistics and science, the disciplines of applied statistics (economics, statistics, and demography), political science, and general history.

It is thus abundantly clear (see Figure 2) that Alain Desrosières' book was initially cited by representatives of three disciplines with equal frequency — those in the field of applied statistics, historians as well as sociologists of statistics, and the sociologists. A crucial point here must be underscored, namely that Desrosières was read as much by those who make quantification an object of study as by those who themselves produce and utilize the data. His book not only serves to "remove the glasses from our nose" but to remount and wear them with greater aplomb. It is in this respect that he was able to remain faithful to his wish to articulate these two postures with respect to statistics. And it is between these two groups of readers that the sociologists constitute an intermediate readership, what might be seen as toggling between the two options, a bit like the review *Genèses* where the statistics are used to produce knowledge about society while at the same time being studied as an instrument of government. This ternary readership is still going strong.

90% History 80% 70% ■ Political Science 60% 50% Economy. Demography, Statistics 40% ■ History of Statistics and Social Studies of Science 20% Sociology 10% 1998 1999 2000 2000 2000 2003 2004 2006 2005 2006 2007 2007 2008 2009 2010 2010

Figure 2: Disciplines of the References Citing La Politique des Grands Nombres

A secondary development is that starting in 1998 one can see the implantation of political scientists who will end up representing more than one-fifth of his readers beginning in 2008. The last definition of politics that he formulated clearly resonated with that discipline, which then as a consequence became increasingly interested in the book under study here. Finally, also appearing in 1998, was a marginal but manifest and abiding interest on the part of historians

in the broader sense. The general historian is now accepting statistical objects as legitimate terrain, something that others, particularly in foreign countries, have championed for quite some time now (Daston 1988, Porter 1995).

Hence the work of Alain Desrosières has been widely disseminated both in France and abroad and has come to interest a wide array of disciplines. Continued survival of the social history of statistics that he invented requires it to be situated at the center of gravity of this constellation of disciplines.

6. Prospects: Lasting Impact of the "Desrosières Effect"

Alain Desrosières' work has inspired too many reprises and extensions for anyone to suggest that there should be a "conclusion" to it all. The prolongement of his memory can obviously not be the affair of one single hypothetical hero, but of the whole flock of his successors. An end point has been reached – but now the prospects loom large. It is with pleasure that I quote several lines that were collectively drafted in his honor when he died, thus conforming to his taste for seeing his friends gathered together.

Alain Desrosières was indifferent to official status, to age, and even to the disciplinary affiliation of those with whom he engaged in a working relationship - and which, in his case, was often indissociable from his friendships. He performed that irreplaceable role of a ferryman not only between the generations but between intellectual communities too often inclined to ignore one another when not engaging in compulsory competition. Embedded in different institutions, he was always concerned with not allowing himself to be reduced to these, of not taking up a position of power within them, and of ensuring a freedom of scope indispensable to creativity. His extraordinary erudition, covering an area of rare expanse, his joy in scholarly ingenuity, and his political vigilance went hand in hand with a humble charisma whose most striking expression was its generosity (Thévenot et al. 2013).

The "Desrosières effect" will make itself felt for many years to come.

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