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Teaching "Quanti" – Lessons from French Experiences in Sociology and History

Pierre Mercklé
ENS Lyon, Centre Max Weber, Lyon, France

Claire Zalc
IHMC, France

Résumé

Enseigner le "Quanti" - Leçons tirées d'expériences françaises en sociologie et en histoire. Les historiens et les sociologues, en France comme aux États-Unis, sont souvent confrontés à la nécessité de recourir aux méthodes quantitatives. Mais quelles sont celles qui sont favorisées en France, et en quoi diffèrent-elles de celles qui sont utilisées ailleurs ? Et comment enseigner ces méthodes ? Dans des contextes très différents selon la discipline, marqués par la crise du quantitatif en histoire dans les années 1980, et par une très forte domination des approches économétriques dans la sociologie américaine, quelles sont les directions prises par le regain d'intérêt actuel pour les méthodes quantitatives en France ? L'analyse des pratiques pédagogiques expérimentées dans différentes disciplines nourrit une tentative de réponse à ces questions qui permette d'esquisser des pistes pour une promotion raisonnée d'usages réflexifs des méthodes quantitatives en sciences sociales.

Abstract

The paper's main objective is to reflect, from both a sociological and a historiographical perspective, on how to use and how to teach quantitative methods in the social sciences. French and American social scientists, whether apprentices or confirmed, often encounter during their work a crucial need to use quantitative methods. But which methods do each favor? And how to teach these methods? In strongly varying national and disciplinary contexts, what are the directions taken by the revival of interest for quantitative methods? Comparing current pedagogical practices may be a heuristic way

Corresponding Author:
Pierre Mercklé, ENS de Lyon, 15 parvis Descartes, 69007 Lyon, France
Email: pierre.merckle@ens-lyon.fr

to raise crucial questions about historiographical uses of quantitative methods, and give way to a cautious advocacy of reflective uses of quantitative methods in the social sciences.

Mots clés
Méthodes quantitatives, Sciences sociales, Sociologie, Histoire, Enseignement

Keywords
Quantitative Methods, Social Sciences, Sociology, History, Teaching

Introduction

Learning quantitative methods? "Bof", as would French students say, using an untranslatable term expressing lack of either interest or enthusiasm. Our reflection on teaching quantitative methods in social sciences started with this contradictory finding: on one hand, students in social sciences dread or despise quantitative methods; and yet on the other hand, reflexivity about teaching quantitative methods is poor among social scientists. Our respective pedagogical experiences have constantly been showing that students, at least at the beginning of lectures and sessions, are not especially keen on what French social scientists nickname "quanti". Why that lack of interest? There might be here some renewed effect of the "taste for necessity" (Bourdieu, 1984) as some students disguise fear under the appearance of indifference, whereas they actually dread the mathematical and statistical skills quantitative methods are supposed to require from them. In what follows we of course try to address the issue of "math anxiety" among social science students, but the fact is that in their own and fully respectable opinions, the core reason why students down on "quanti" is . . . because it's dull. Quantitative methods are not glamorous, or not anymore – far less glamorous anyway than archives in the eyes of historians, or the "field" in those of sociologists. As Antoine Prost (1996) pointed out, "certain self-styled princes of the intellect commonly express haughty disdain for insistence on rigor or quantitative discipline of any sort, as though these were trivial concerns, menial chores to be left to subordinates."

And yet, as difficult as it may seem to get students interested in quantitative methods, reflection on how to teach them has been rather poor so far. Articles about teaching quantitative methods in social sciences are rare. *Teaching Sociology* has published a fair amount of articles on quantitative methods until 2007, and even a whole issue on teaching quantitative methods in 2006. But it has published only four articles on the subject over the last five years instead of an average of four a year in previous times. Thus, our questions draw from the contradiction between these two findings: how to make quanti sexy (or sexy again)? How to do it without repeating the past mistakes? We are convinced that the answers to these questions are not trivial, and that they could deserve a little more reflection than they have so far. So we want to add a very modest contribution to that reflection, from our specific points of view: this discussion is based mainly on our own experiences in teaching quantitative methods in different French institutions and different disciplines – History for Claire, Sociology for Pierre – and to

different audiences (both elite and mass). In order to address that simple question – how to teach quanti for social sciences so it's sexy and produces tangible results? – we need to answer a few others, in that order: we will start with examining why teach quanti, and then we will proceed on by asking who, how and eventually what we should teach.

Why Teach Quantitative Methods?

Why bother teaching quantitative methods, after all? What's the use of all this? The issue here deals with answering two rather distinct needs: first, we teach quanti out of necessity, and second, to promote quantitative literacy as a form of social empowerment.

Out of Necessity

To specify our points of view even further, we must confess that at the very start of our respective researches, neither of us was especially into quantitative methods. Claire was not at all fond of quantitative methods, and she wasn't especially trained to it either. Her master degree on German and Austrian migrants in France in the 1930's was entirely based upon discursive sources: reports, surveys, commissions of the Refugee records . . . But then in the course of her PhD dissertation in History, which focused on immigrant shopkeepers in the interwar period, she eventually had no other choice than surrender to quantitative methods: her main source, the Business Register, was massive (over 1 million inscriptions) and it was very hard to figure out how to deal with it without sampling . . . In that perspective, quantification was not an end in itself or a religion, but one tool among others. Well, maybe she too may have thought at the origin that "quanti" was difficult and/or boring . . . Anyway, the first necessity that lead her to learning and using quantitative methods was thus scientific. As for Pierre, his PhD dissertation examined the contributions of French utopian thinker Charles Fourier to the construction of social science in the 19th Century, which did not unavoidably imply any statistical approach. The revelation came a little later, just after defending his dissertation: he had to convert from historiographical and epistemological approaches to fieldwork and quantitative methods if he wanted to get a chance to be recruited in his discipline.

This is no news (at least to Anglo-Saxon social scientists) that sociological research is more exclusively dominated by quantitative methods than other social sciences and than History for sure. In a recent article, French sociologist Etienne Ollion tried to assess that domination quantitatively inside US sociology: it is massive, and it is growing (Ollion, 2012)! Sociology, and not only north-American sociology, valuates quantitative literacy, and when it comes to securing academic tenure-track or tenured positions, you'll desperately need to show some quantitative skills (for instance in the form of explicitly quantitative papers, and at least by naming mastered software). That second type of necessity is more of a strategic kind, though we may be less easily willing to confess it – but it is not less binding than scientific necessity. At the same time, quantification in history was harshly criticized, especially since the mid-1970s on both sides of the Atlantic (Fogel, 1975; Béaur, 1996; Blin and Gervais, 2014).

What is important to understand here, is that we adopted quantitative methods not at first out of any ideological conviction, but only because we did not have the choice. The "why" here may deliver elements to understand the "how" a little further: because we began to use some quantitative methods more out of necessity than out of faith, because we had to more than we wanted to, we may be willing to seek and maintain some critical distance from the tools we use than others.

To Promote Quantitative Literacy

This may sound a little bit ridiculous and grandiloquent, but there may be some interesting side effects to raising the overall level of quantitative literacy. Promoting "statistical citizenship" may benefit social and political empowerment: you are less easily fooled by numbers once you know how to produce and analyze them. One thing is sure: dealing with numbers and the way of producing statistics is certainly a political matter. Thus, as Alain Desrosières once wrote, "training [of statisticians] should include courses not only in probability, mathematical statistics, economics, and econometrics, but also in law, political science, the sociology of quantification" (Desrosières, 2007: 16). And reciprocally, if we may paraphrase Desrosières, we would say that training of sociologists and historians should include statistics and survey methods . . .

Promoting "statistical literacy": that may sound naive, yet this ambition has partly grounded the history of social sciences in France and elsewhere, and has partly grounded the history of their teaching too. In France, the historical definition of the Profession of Sociologist (Bourdieu et al., 1968) by Pierre Bourdieu and colleagues clearly built on that ambition, as did, the same year, the introduction of social sciences in compulsory high school curricula. Today, in France, a third of all General Education Diplomas are in "sciences économiques et sociales", which makes France stand as an exception (along with Spain, Belgium and Sweden) in the international educational landscape.

Why now? quick views on the recent history of quantification in social sciences

Because it's about time to end the quantitative history crisis - That may not be easy to conceive, but in France, the very dominant model of making history through quantification, valid during the 1960s and the 1970s, entered by the following decade into a deep crisis. In fact, in the 1980s and 1990s, quantification began to retreat under the onslaught of both practical and theoretical pressures (Blin and Gervais, 2014). As historians faced major new methodological challenges, most notably from the postmodernists and what came to be called "the cultural turn", rising criticisms claimed that quantification had not fulfilled its promises.

First, there are historiographical reasons to this crisis and its symptoms: initial enthusiasm for quantitative methods had caused many people to forget the biases inherent to statistics, and in particular the dangers of anachronism in long data series. Given the changes of the definition of nationality between the mid-19th and the end of the 20th century, does it make sense to calculate an evolution of the

percentage of foreigners in France? Shouldn't historians prefer no answer than a biased answer?

That growing mistrust coincided with the return to the individual, to narrative, to the political and to texts, and that came to be seen as antagonistic to quantitative approaches. Marxism, economic determinism, structuralism and quantification, though not always allies, were nevertheless rejected together. Much of the academic left, throughout the world and not just in France, chose to pay greater attention to the actual experiences and capabilities of historical actors, and therefore moved closer to "humanities", and a little farther away from "social sciences" (Sewell, 2005). For instance, proponents of Micro history have developed the notion of "normal exceptional" based on the idea that abnormal situations, which by definition are impossible to organize into series, are more revealing than a thousand of documents all cut from the same mold (Lemercier and Zalc, 2008).

Because hardware and software have never been more accessible - Yet, quite ironically, it is almost at the exact time when computers became widely available, in versions small enough to fit on a desk and powerful enough to perform thousands of operations in a flash, that quantitative methods in history began to lose favor. Before 1970, no one could record, preserve, and process datasets on his own. It was a privilege to access computers, and computing remained an elite prerogative. Quantification was thus reserved for a restraint group of scholars. Today such operations have become routine and are almost trivial: nearly everybody has a computer, a laptop even.

And software too have become much easier to handle. It has actually become so easy that you don't (or less) need an engineer to help you process your data. Of course, that means that you are alone in the task. This is not easy. Before, the structure of the research process was very hierarchical: the social scientist was the thinker who could outsource data processing to a specialist, as Claire Lemercier showed for the Centre de Recherches Historiques of the Ecole des Hautes Etudes en Sciences Sociales (Lemercier, 2005). This is no longer the case: Excel has helped democratize data analysis; "push-button" software have been developed by and for social scientists, such as IBM's SPSS; in France, many all-in-in-one survey processing solutions have emerged, that are widely used, even in high schools, such as Modalisa, Sphinx, Ethnos. And the "R revolution" has eventually reached social sciences: the most powerful solution is now free and collaborative, instead of expensive and proprietary.

Because data have never been more abundant - This is true of course in sociology: big data has been the big issue for a few years now, and in Pierre's fields of research, teen cultural participation and social networks (Mercklé, 2016), there has been dramatic changes in available data during the last decade: web-based surveys drastically reduce costs of data gathering. For instance, this makes ELIPSS possible: Pierre is chairing the scientific committee of this French initiative that offers a 5,000 person touch pad longitudinal survey panel to French social scientists free of charge; data curation and access has been favored by the emergence of institutions such as ICPSR, or the Réseau Quételet in France; the irrepressible penetration of digital devices in everyday life has been producing unprecedented amounts of "digital traces" left by individual activities; web scraping techniques and tools to harvest these traces have opened "statistical El Dorados" to social scientists. But that is true in History too, as tabulations of census or

vital registration records showed. The French "3000 family survey" or "TRA survey" is also a good illustration of this process. Several very different contributions have been using those data, on several topics, from demographic to inheritance issues.

As said before, we do not consider ourselves as quanti-activists, but there certainly are opportunities that cannot be missed. Because if social scientists miss them, others won't: neuroscientists have vigorously been competing with sociologists over common issues for two decades; and physicians are discovering that social activities maybe more complex, and thus more fun to model than particles. And their technological and financial strike force is proportional to their lack of sociological insight . . .

Whom and How?

Whom?

Whom shall we teach, and whom *de facto* are we teaching quantitative methods in social sciences? We in France have to deal with an even more severe version of what articles in *Teaching Sociology* call the "Quantitative Literacy Gap" (Howeryn and Rodriguez, 2006; Wilder, 2009). To put it in simple words, we are confronted with two very different kinds of audiences, that reflect a very well known and long endured divide inside the French education system (Bourdieu, 1989). On one side, a restraint elite audience: students who learn social sciences in the French *classes préparatoires* and *grandes écoles*: Ecole normale supérieure (ENS), Ecole nationale de la statistique et de l'administration éconmique (ENSAE), Sciences Po, usually after a heavy science curriculum in high school: 4 hours a week of maths in Junior Grade and 6 hours a week in Senior Grade, and 4-5 hours a week in a *classe préparatoire "sciences sociales"*. In other words, the students we teach in Sociology MAs in the ENS or Sciences Po have been doing maths and stats 4 to 6 hours a week for the 5 previous years. On the other side, a much wider audience of students in what French call Mass universities and faculties (either in history or sociology), who are usually very uneasy with mathematics and statistics, even though stat classes are compulsory at each level. These students usually have had a much less intense training in maths and stats in high school: mass Sociology departments enroll students from social science high school degrees who have had less maths courses, who picked up these degrees because their lack of maths skills eliminated them from the elite curricula; and mass History departments enroll students from literature high school degrees who have had no compulsory maths courses for years. Thus, initial skills and appetites for maths and stats are very heterogeneous, and the gap widens deeper, and more irremediably, during high school years.

Struggling with Math Anxiety?

Yet, our objective remains not only to train elites, to train our future peers, but to train the highest proportion of each generation of social science students, and provide them with skills and appetites for quantitative methods. Thus, the question is: how do we do that? How do we teach quanti to students that lack skills and interest for mathematics and statistics?

This crucial question could be put in psychological terms, as our U.S. colleagues seem accustomed to: a significant amount of the "teaching quanti" literature in *Teaching Sociology* deals with what they call "math anxiety" (Paxton, 2006; Van Gundy et al., 2006; Decesare, 2007; Macheski et al., 2008). Yet, as French social scientists we would formulate the problem less in psychological than sociological terms . . . As the French sociologist Philippe Cibois puts it in the introduction of his guide to cross-tabulation:

> Sociology students usually don't like math, and that can be easily explained: as shown by the sociology of education, they have been forced during high school to shift towards literature or social science curricula, due to their low scores in mathematics. To perform this social sorting, math teaching in high school is characterized by high, efficient and deliberate levels of abstraction: thus, it succeeds in persuading a lot of people that they are clueless in mathematics, that it's not their thing and other ex post rationalizations meant to account for what is often experienced as a humiliation and a failure. This is a French specificity, and a quite recent one, and I hope it won't last eternally: in many countries, math courses are simply meant to teach math, not sort and select students. Thus, students in English-speaking countries have fewer difficulties to learn quantitative methods than their French comrades, who are often paralyzed by any presentation that would recall too bad memories. (Cibois, 2003: 2-3)

Teach Quanti with or without Mathematics?

As far as History is concerned, one thing is sure, the way quantitative history is taught in France is not helping: it is often taught by specialists, who have an interest in exaggerating the difficulty of their craft for personal, not to say selfish, reasons. There is a strong belief that you need a strong background in mathematics and statistics to understand quantitative methods.

So at the bottom of it we both think that we are facing a very simple and basic alternative, which is: either teach statistics, or teach their uses? Either teach them without any formula, no maths inside, or always go down to the mathematical roots of each method? For instance, how would you teach multiple correspondence analysis? Rencher's way (Rencher, 2002), i.e. with formulas, or with a rugby ball, as used to do French sociologist Christian Baudelot in his stat classes? Well, we have taken side: our objective is not to hijack sociology or history classes to surreptitiously train students to the maths and stats they have been deliberately disgusted with before. It is to turn them into informed users of quantitative methods.

What?

So now it is time for answers, or at least for proposals drawn from our own experiences in teaching quantitative methods to various French audiences. The choices below have been globally mocked in a controversial article published almost ten years ago in *Teaching Sociology* (Moran, 2005). Yet we think it is about time to reaffirm these positions, in history for sure, but in sociology too.

Teaching by Doing

The idea is to transform the class into a research team and to accompany them to build a project, from elaborating a problem, localizing the data, converting them from their original form to the most convenient electronic format whenever necessary, to trying some analysis and eventually writing reports drawn from their results. Of course, this is an ideal, and it requires resources, equipments, and available data. But this has been getting more and more practicable as access to data, computers and software has been getting easier and easier.

Of course, there are consequences to this pedagogical choice. Whenever possible, we must favor free software solutions to allow students to bring them home and to go on using them once class is over. Thus, R rather than SAS or Stata. Or for social network analysis (SNA), rather R packages or Pajek than Ucinet. Students that dread math may also dread script-based software. Adapting tools to audiences means choosing push-button solutions with quanti-phobic audiences. Thus, in such cases, rather SPSS than R. And for SNA rather Gephi than R packages. Or in France, we may favor integrated all-in-one solutions, such as Modalisa, which is very popular in high schools and colleges. And one should not neglect that you can do a lot of things with Google Form survey tools and spreadsheet cross-tabulation functions, or with the free NodeXL template for social network analysis. And as for data, we strongly advocate using real rather than fictitious data sets. For years, forged examples and simulated data sets have been the basis of quantitative methods classes. This is less and less true, at least we hope. So if it is about getting ready-to-use data set, prefer real ones: as we have shown previously, ICPSR, in Britain the UK Data Service and in France INSEE's "Fichiers Détails" are "drag'n'drop" downloadable. And every European country now has its own data archive.

Help Students Produce their own Data . . .

Yet, the question is: should we rely on such data sets to teach quantitative methods? Should we put the accent on producing one's own data or mastering second-hand data? So far, we've had a general agreement on how to teach quantitative methods. But on this, historians and sociologists may diverge a little . . .

Input Methods - For the historians, helping students produce their own data appears as a necessity. It seems to them that they teach how to transform historical sources into a database. The transformation of "raw" source material into quantifiable data proceeds in two stages: first, input, which means recording archival information in a computerized document, and second, coding, which modifies the input to form more or less homogeneous categories that can then be processed numerically. Confusions between these two stages are responsible for many of the criticisms of quantification (Lemercier and Zalc, 2008). They must be distinguished clearly. Teaching by doing is, for example, making with students, a database about "French MPs in 1946". The thing is easy because the biographies of those MPs are available online.

Historians emphasize the importance of the input phase of research not because they wish to impose an arduous and unpleasant "rite of passage" on training researchers but

because they believe that this work is a key moment in any research project. As tedious as inputting data may be, it offers an opportunity to become really familiar with the data and to begin to think about how the material is structured. As things currently stand, this part of the job can no longer be passed on to others, but this is not necessarily a drawback.

For many researchers, the input phase offers an opportunity for physical contact with the subject matter. It is also a source of numerous questions. For the historians, it is comparable to field work for the anthropologists and sociologists: it requires physical commitment, fosters intimate knowledge of the source material, and inspires many research questions. Let think about the way to deal with photographs of the deputies: one student proposed to create several columns about the photographs and the way deputies from colonial territories were posing, or not. What image did they offer? Huge debates in Claire's class showed up about: should we, or not, say something about the physical appearance of the deputies and, especially, about their racial "images". The result was a very interesting reflection upon the use of photographs as a source for historians, but also leads some students to do archival research about the corpus of photographers in the Assembly during the 1950s.

Coding Data - There are two ways to answer the debate on categorization in making historical data: either work on construction of racial categories as did Paul Schor in his book about American census, for example (Schor, 2009); or do it to understand the process and be aware of the making of categories. Both should actually be taught "by doing": coding is one of the issues on which criticism of quantitative methods has focused since the 1980s. The potential pitfalls are many, including anachronistic use of nomenclature, simplification of the data, reification of individuals, and improper aggregation of diverse entities. Coding also eliminates much of the richness of the raw data extracted from the source, but it is essential if the data are to be processed statistically. One can nevertheless conceive the coding process as an opportunity to reflect on sources and the purpose of the research. Problems of labeling and comparability can be made explicit on such occasions.

Sampling - Let's go back to the TRA survey that we mentioned above. This database has been built by French demographers by picking every single individual whose name began with the three letters TRA. They chose these specific three letters after much debate, arguing that they were as relevant, or common, in the North as in the South of France. But they overlooked the specificities of the French distribution of national origins, and as a result of choosing these three letters, they inadvertently overestimated Vietnamese (TRAHN) and West Africans from Mali (TRAORE). As you can see, this method was not a good way to get the desired information. The persistent ignorance of sampling techniques, which contributed to the rage for massive, not to say exhaustive, data collection, is a pain . . . So helping students to sample without doing big mistakes seems to us very helpful! Above all, they should know how to sample properly. Quantification makes sense only if the obtained results are commensurate with the effort required, especially in data collection.

Or Help them Handle Second-hand Data?

In the sociologist's view, mastering what they call "secondary analysis", i.e. analysis of survey data produced by others, may appear as necessary as producing them is for the historians. Socio-demographic data production has for a long time now been far more centralized and institutionalized than historiographical data production: surveys based on large representative samples have been conducted for more than half a century by public research organizations such as INSEE, INED and the research departments of the main ministries (Culture, Labor, Social affairs, etc.), which compose, when assembled, what we call the "Statistique publique". And they have been conducted by highly skilled professionals, whose training and immersion in research institutions guarantee, in the long run, levels of methodological cumulativity that have no equivalent in history. Sociologists do have at their disposal a statistical public service that has accumulated over half a century of methodological knowledge. So, at least during the last decade, there has been an unprecedented advantage in relying on those newly accessible data sets to conduct secondary analysis: in a constrained time schedule (quantitative courses usually do not exceed 40 hours a year), gain is undisputable: it allows to focus on data analysis, interpretation and writing.

Yet, the secondary analysis era might soon be behind us, or so say some. Converging factors may favor a shift towards using original data in class: web surveys make it possible to elaborate data sets at almost no cost, and tools such as Google Forms or LimeSurvey make this very easy to implement with students; digitization of printed data and harvesting of huge amounts of digital data are getting much easier than before; institutions and organizations of all kinds are more willing to share the data their activities generate: the amount of what is called "open data" is continuously increasing. Put all this together, and you get an unprecedented amount of available data.

But there are several drawbacks to big data. In many cases, such data sets are not "more primary" than those drawn from public surveys, and the construction and sampling processes they rely on may be far less documented than them. And the time you spend understanding secondary data sets may give you as intimate a knowledge of it as the time you spend producing you own data sets or scraping them from the web. This year, for instance, Pierre is teaching quantitative methods by having his students test the increase of musical omnivorousness with the data of 40 years of French surveys on cultural participation. When building a score to measure omnivorousness, they have to deal with categorization and anachronism issues very similar of those raised just before from the historian's point of view . . . Listening to rock and classical music in 2008 scores 2: is it being as omnivorous as listening to military music and operettas in 1973? Those are the issues that secondary data analysis allows to confront students with, too . . . .

Which Quantitative Techniques?

The choice of one statistical technique over another should not be based on rigid criteria. Preconceived ideas about the comparative virtues of this or that technique are commonplace. In practice, however, it turns out that *a priori* methodological choices (of, say,

network analysis or factor analysis) are not necessarily well adapted to the available sources or to the questions one wants to answer. It is therefore useful to gain an overview of the basic principles, scope and conditions of applicability and potential drawbacks of the main quantitative techniques. Each has a different purpose and is more or less well suited to certain types of sources and certain types of questions.

To illustrate this, we may finish this discussion with a classic dilemma, at least among French quantifiers: should we advocate our French students to use the very French factor analysis, or to use the regression models that are so widespread in American sociology, as shows the evolution of the use of regression models in the *American Sociological Review* (Ollion, 2012)? Well, we would not solve this dilemma without teaching our students some social history of the uses of statistics and statistical methods: we would then explain how factor analysis has long been associated with the kind of sociology that developed in the 1970s around the work of Pierre Bourdieu, and has been used since to uncover overall social structures and display antagonisms that polarize social fields. We would also warn our students that in France at least, factor analysis has constantly been balanced against regression models and "all other things equal" reasoning, which have been long suspected of pretending that one could, as social scientist François Simiand said, "compare the behavior of a reindeer in Sahara with that of a camel at the North Pole" (Desrosières, 2001). Yet, we would also show that regression models may nevertheless help unravel, separate and order efficient causes of social phenomena, and that they may serve distinguishing between side effects and true factors.

And eventually, we would encourage them to mix methods, as we did for instance in an ongoing common research on the persecution trajectories of Jews during World War II (Mercklé and Zalc, 2014). We did factor analysis, we did regression. But eventually it turned out that the process of persecution could not be analyzed simply as a final result (survival or not) but should be understood as a trajectory. These aspects and difficulties of univocal interpretation led us to try other ways of reading the data, formulating ideas and modeling, and eventually combine sequence analysis and regression models . . . So our final point, when it comes to determining "what" we should teach, would be to favor of a large scope of combined tools, to always try alternate methods and not systematically stick to the standard ones, and to contextualize the uses of each method.

Conclusion - An Advocacy for Mixed Methods

We advocate quantitative methodologies in social sciences as a means, not an end. Methods are tools that leave room for tinkering, experimentation and variations on "standard" themes. Counting, measuring and modeling never guarantee scientific relevance by themselves, although they may help getting closer to that ideal. When a source is suitable for quantification, the best method for dealing with it is not always the most elaborate one. Simple cross-tabulations coupled with appropriate significance tests may be enough to answer the basic questions. Still, social scientists should not be afraid of supposedly more complex methods, which can usually be mastered easily enough if the source and the questions one wants to answer are appropriate and if certain precautions are taken.

The issue in teaching quantitative methods is not to discourage the beginners but rather point the way toward proper handling of the data. Of course risks of error and manipulation do exist, as they do everywhere, but quantitative methods actually have the advantage of forcing the investigators to be explicit about choices and procedures. Hypotheses must be stated, and their limits considered; sources must be examined with a fresh eye and perhaps construed in new ways if they prove difficult to quantify or code; various statistical techniques should be tested, and analyses should also be carried out at different scales; and collaboration and collective work should be favored at each of these steps . . . And under these conditions, "quanti" may prove an enjoyable and exciting way to do social sciences!

Quantitative analysis is not as esoteric as it may seem at first to the uninitiated. It is just an ordinary set of techniques that scholars and students may have to confront with in social sciences. Some scholars use quantitative analysis with imagination and some degree of sophistication. Some published works, on the other hand, do seem seriously flawed in their use of quantification. Social scientists are of course legitimate to critique historical and sociological writing that uses quantitative analysis, but ideally they should also be skilled enough to appreciate it correctly when it is done well. But to provide large numbers of social science students with the basic quantitative skills, the need for sufficient hourly volumes is real. We are definitely promoting a narrative approach to quantitative methods. That is our very personal and very French point of view, based on pedagogical experiences in two main disciplines, somehow different but complementary. As Philippe Cibois said in French: "Il vaut mieux être sociologue pour enseigner la statistique aux sociologues" (Cibois, 2003: 4). In other words: if you want to teach statistics to social scientists, you'd better be a social scientist yourself!

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