



BOOKLET WP3

Material for PhD students

Summer School « Towards a European Politics of Capability »
Venice, May 20th-23rd 2009

Changing methods in working lives assessment. Operationalizing the capability approach.

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Due date of deliverable: **T+ 29 (Mai 2009)**
Actual submission date: **T+ 30 (June 2009)**

Duration: **4 years**
Start date of project: **1st January 2007**

Organisation name of lead contractor(s) for this deliverable :
CEREQ (partner 4)
CNRS (partner 1)
UAB (partner 15)

Project co-funded by the European Commission within the Sixth Framework Programme (2002-2006)
Priority 7 _ Citizens and Governance in a Knowledge-based Society



Dissemination Level

PU	Public	X
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Changing methods in working lives assessment Operationalizing the capability approach

The Work Package 3 (WP3) included in the CAPRIGHT project has the ambition to examine the contrasting realities found in individual working lives from the point of view of the dividing line between imposed and voluntary mobility. A first line of enquiry concerns the collective resources available to people that enable them to control their mobility. What resources – institutionalised and/or negotiated – guarantee professional security, or, contrarily, generate career fragmentation? A second level of enquiry addresses effective freedom of choice, from the point of view of these collective resources, as the expression of the capability of individuals to determine their own working lives. To what extent and how can a person convert collective resources into effective achievements and valuable outcomes?

Dealing with these two lines of enquiry, the WP3 research agenda proposes to combine two analytical grids in an attempt to analyse individual working lives: the capability matrix coming from Sen's approach and developed in the EUROCAP network; and the resource regime framework resulting from the previous European network RESORE which constitutes an institutional perspective on configurations and changes in rights over resources.

Concerning the integration of the CA and the RRA, central issues relates to the notion of resources. In the Sen's approach "resources" designate means, being economic or not, to enhance people's well being and advantages. The RRA develops a framework to integrate the very institutional nature of a "resource" in order to analytically define social rights and collective supports for individual trajectories in relation to the dominant form of the wage-welfare nexus in a given society. Thus the RRA considers that the way economic resources flow through the wage and the economic process determinates the means available to individuals and the way to get access and to use them, partly defined as "conversion factors" in the CA. This distinction relates to the nature of each framework. The CA is a normative framework for assessing policies and resources are one part, but only one part, of the capability for individual and they constitute a tool for public action. The RRA is a positive framework to identify complex institutional configurations where the institutional form of resources is not neutral in relation to employees (or citizen) socio-economic status but formative of social groups and social identities.

When addressing the employment and welfare policies from a combined resources and capabilities approach the necessity to deal with individuals' working lives and life courses arises. When empirically assessed, pathways are usually measured by a range of indicators which capture different effective transitions on the labour market (from training to employment, from unemployment to employment, from employment to inactivity, etc.). However, the objective to analyse individuals' trajectories also requires using methodological and theoretical elements coming from diverse biographical approaches.

This training course evaluates the potential rewards of using the capability approach (CA) promoted by Amartya Sen and the concept of resource regimes –in combination with a longitudinal approach– as sensitising concepts and as an “enriched informational base of judgement” in evaluating European employment and social protection programs. The research proposals in this field and their obstacles to fulfil the promises of the capability approach will be discussed. Operationalizing Sen’s capability approach is one of the most important challenges that lies ahead of this endeavour. Although some empirical work provides a framework for assessing resources and capabilities, there is no “one-size-fits all” method that could be applied. However, there are common issues to overcome, considering that freedom of choice is a key priority. This session looks more closely at the terms of the debate, the issues at stake and the current practices and methods. One of the priorities of the session is highlighting how the combination of quantitative and qualitative methods can improve the empirical approach to Sen’s theoretical formulations. There is a lot to be gained by surveying the crossing points between two approaches too often considered to be opposite and even incompatible. This training course will alternate presentations of the teacher and collective discussions on the basis of text produced by the students. An active participation of the students is therefore expected.

Exploring quantitative methods to tackle working lives with a resource-capability approach.

Olivier Joseph and Josiane Vero

Session: Thursday 21 May, 8:00-14:00

The starting point of the capability approach goes back to discussions in liberal political philosophy which have offered a wide menu of answer to the key issue : “equality of what? What metric egalitarians should use to establish the extend to which their ideal is realized in a given society ? (Cohen 1993). What aspects of a person’s condition should count in a fundamental way ? In his Tanner Lecture of 1979, Sen argued in favour of focusing on the capability to function, that is, what a person can do or can be. So in a capability approach, the informational basis of judgement should be capabilities. From that time, the capability approach has become “*a broad normative framework for the evaluation and assessment of individual well being and social arrangements, the design of politicises, and proposals about social change in society*” (Robeyns, 2005) and other scholars have developed it further in recent years.

Sen’s capability approach (CA) is basically a normative framework for assessing alternative policies or states of affairs. According to the CA, social arrangements should primarily be evaluated according to the extent of real freedom that people have to achieve the plural functioning (beings and doings) they value (Alkire, 2007). This amounts to dealing with this specific information base of judgement in justice).

1. Central concepts of the capability approach

The eponymous idea of capabilities is the core concept of the capability approach. Capabilities can be thought of as a step between resources and functionings which cannot directly be observed (as illustrated in the diagram in Figure 1). Functionings are actual achievements of a person: they stand for what he or she is or does. They have to be distinguished from capabilities, representing the potential functionings of a person, i.e. what she could be or do. According to Sen (1993:31), “the capability of a person reflects the alternative combinations of functionings the person can achieve, and from which he or she can choose one collection”. The distinction between the realised on the one hand and the effectively possible on the other hand could also be described as referring to the difference between achievements and freedoms. Capabilities as combinations of beings and doings that a person can achieve reflect the real set of options a person has, thus her freedom of choice. The second distinction is between resources and capabilities. Resources are entitlements and commodities available to individuals, be they produced or not on the market, exchangeable or not against money. So, the capability approach also rejects normative evaluations based exclusively on commodities, income, or material resources. As Robeyns (2005) notes: “*Resources are only the means to enhance people’s well being and advantage whereas the concern should be with what matters intrinsically, namely capabilities*”. Indeed, given equal resources, when faced with the same contingencies people do not have the same ability to overcome them (Salais and Villeneuve, 2005). They do not

have the same power to convert the means at their disposal into real freedom. There are factors which influence how well a person can convert resources into capabilities.

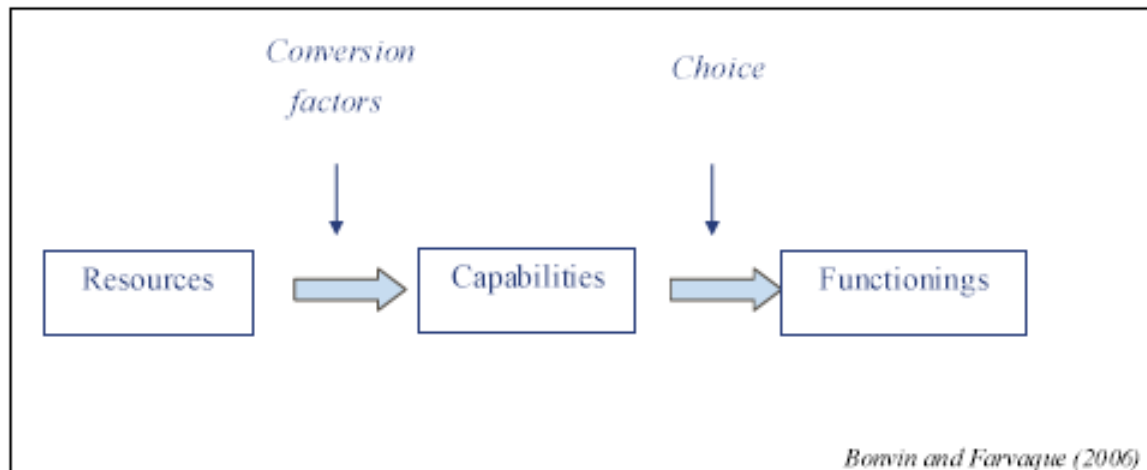
The emphasis on capabilities does not disagree with the important contribution that resources can make to people's working lives. Indeed, inequalities in resources can be significant causes of inequalities in capabilities and therefore also need to be studied. A complete analysis of working lives should not only map the lack of in functionings and capabilities, but also analyze which inequalities in resources cause impact working lives and inequalities in capabilities and functionings.

Nevertheless, the very important advance of the CA lies in its stress on conversion factors, i.e. on the proper conditions allowing translating formal rights and formal freedoms into real rights and real freedoms. The extent to which a person can generate capabilities from resources and entitlements depends on "the factors that determine how smoothly this conversion can be made" (Robeyns, 2007). After Robeyns (2003), one can acknowledge that there are different conversion factors that influence the capability set. What people are effectively able to do and to be depends on three kinds of conversion factors: personal, social and environmental. For example, assessing employees' capabilities cannot be achieved independently of the context, which means social conversion factors, and so it requires in-situ contextualised judgements. As recalled by Bonvin and Thelen (2003), "this concept of 'situatedness' is at the very centre of the capability approach". If individual needs are to be duly taken into account, then the prominent role of specific conversion factors ought not to be restricted to certain variables like gender, company size or sector. Furthermore, the dynamics of conversion factors must be understood in most cases as an interplay of different factors or of different kinds of factors: an individual's joblessness due to discrimination against the colour of his skin is actually due to both an individual and a social factor, neither of whose would have rendered the detrimental outcome on its own. With regard to the sphere of working lives, the role of the conversion factors is crucial since they may either enhance or impede capability for voice, capability for work (including learning and training), work-life balance.

Hence, part of the difference in attainable functionings is due to conversion factors. An individual right to training does not tell us what the person will be able to do with this right. For example, in France, employees have the right to a personal training program (DIF). While employees make the initial request for training, they must obtain the company's agreement. The final choice of training program is reached by mutual consent. So the ability to convert the Individual Right to Training (DIF) into a real right is dependent on different conversion factors. Among the environmental conversion factors, companies' policies play an important role as they are in charge of implementing institutionally drafted rights. Hence, the information provided in the company about this right, the procedures for collecting and discussing employees' training wishes, the existence and role played by staff representatives, the existence of a company agreement concerning training at least in part, the company's level of training expenditure are environmental conversion factors that must be duly taken into account. Furthermore, personal conversion factors, such as ability to use informal levers, especially when there are no structuring tools accessible to everyone within companies, do impact the functioning one person can draw from a given a formal right. Such social conversion factors as child care organization, and specially women's place in child care, play a crucial role for women, especially when DIF training take place outside working hours.

Similarly the formal right to voluntary paternal or maternal leave is mediated not only by the constraints (possible reprisals) imposed by companies to fathers or mothers wanting to take a leave, but also by economic factors (economic necessity, if the leave comes with an allowance which is not wage equivalent) or cultural and social factors (men do not take it as care work is socially assigned to mothers).

Figure 1: The Capability Analytical Framework



This distinction leads us to emphasize the conception of individual responsibility in a capability approach. A person could not be considered responsible for individual outcomes if he or she lacks any real freedom to achieve valuable functionings. For example, as Bonvin and Farvaque (2005) recalled, responsibility of unemployed people in matters of employability or getting back to work could not be advocated if real freedom for work is not given.

To understand the stakes associated with freedom, one needs to distinguish negative and positive freedom. As underlined by Berlin (1969), negative freedom is the absence of obstacles, barriers or constraints whereas positive freedom is the possibility to act in such a way as to take control of one's life and realize one's fundamental purposes. While negative freedom is usually attributed to individual agents, positive freedom is sometimes attributed to collectives, or to individuals considered primarily as members of given collectives.

This is due to the possibility of need for collective support, e.g. in the form of resources, in establishing positive freedoms. Hence, the way freedom is interpreted and defined can have important political implications. Current reforms are marked by the "negative" conception of freedom, and there are few cases of positive freedom (Corteel and Zimmermann, 2007). According to Sen, however, exercising individual responsibility requires positive freedom to act. Therefore, even if it takes an individual's point of view, the capability approach should not be misinterpreted as a concept allowing to hold the individual responsible for its achievement unless real freedom of choice was given, both concerning the existence of valuable options and the individual's ability to actual select either one of them.

This twofold condition illustrates the two aspects of freedom, as recalled by Bonvin and Farvaque (2005): the process aspect and the opportunity aspect. The process aspect deals with the ability to be agent, that is to affect the processes at work in their own lives or as general rules. The opportunity aspect deals with the ability to achieve valued functionings.

According to Sen, the concept of capabilities is more suited for elaborating the aspect of freedom that deals with opportunities: "While the idea of capability has considerable merit in the assessment of the opportunity aspect of freedom, it cannot possibly deal adequately with the process aspect of freedom, since capabilities are characteristics of individual advantage, and they fall short of telling us about the fairness or equity of the processes involved, or about the freedom of citizens to invoke and utilise procedures that are equitable" (Sen 2005: 155 f.). However, Sen clearly argues that both the opportunity and the process aspect of freedom require consideration. Thus, low-quality workfare programs, designed to force unemployed people back to work by making unemployment allowance depend on their participation, cannot be justified in a capability framework: instead of enhancing opportunity freedom by adding valuable options, they reduce the individual's capability set by eliminating the capability not to participate. Of course, this reduction of the scope of choice implies a loss of process freedom at the same time.

2. Operationalizing the CA

The capability approach has influenced research in many different areas, and it has received significant reflection in both theoretical and empirical research. However, on the base of quantitative methods, there are a number of issues to be resolved, which need to be developed if the framework is to be fully applicable as a framework for measuring working lives and we'll tackle some of them.

- First, operationalizing the CA is not a simple exercise, since the CA is underspecified. The CA is a framework of thought, a normative tool, but it is not a fully specified theory that gives us complete answers to our normative questions (Robeyns, 2003). Hence, it entails some additional specifications to be made such as the selection of relevant capabilities and the weight of the relevant capabilities. The former issue requires a specific attention as "*economists have not reached consensus on the dimensions that matter, nor even on how they might decide what matters*" (Grusky and Kanbur, 2006).
- Second, there are several problems that arise in the attempt of operationalising the capability approach such as the way to tackle the multidimensional-context-dependent counterfactual of information to be needed (Comim, 2001). Among others, Sudgen (1993), Yandser (1993), Srinivasan (1994) and Roemer (1996) have debated this issue. So, the CA is not straightforward to convert in practical terms. Even if the approach makes sense, its operational content is challenged. Where and how data on capabilities can be found? In most cases, the statistical surveys conducted within individuals gather some data on situation which occurred rather than on situations that would have occurred or might occurred. Hence, the problem of capability observability and the distinction between capabilities and functioning appears.
- Third, adopting the capability framework implies thinking about the various processes by which empirical data are produced, as far as most of the existing datasets have not been collected with the aim of measuring neither functioning nor capabilities. This implies to ask ourselves questions about the way to highlight some information to be used, the necessary deconstruction and reconstruction process of statistical data and categories and the way to deal about the collected information, to assess their relevance degree for a capability application. This implies to ask ourselves about the way to implement some satisfactory survey protocols.

- Fourth, the CA is not nor a mathematical algorithm that prescribes how to measure quality of life, development, poverty, etc. Hence, it entails some additional specifications to be made. It supposes also to deal with the way to analyse data with a knowledge purpose such as how different capabilities should be aggregated in an overall assessment, etc. From a quantitative angle, the methodologies used to measure (the) capabilities are various. They can turn to the factor analysis, the principal component analysis, but also the fuzzy set theory or multidimensional indices, and even structural equations, but also equivalent income measures, or the efficiency analysis, and beyond.
- Fourth, the CA has only recently become of increasing interest in analytical and empirical studies of issues related to employment, work, training or learning while it has been used in a wide scope of domains, most significantly in development studies, welfare economics in order to assess a variety of aims, such as poverty, or inequality assessment, quality of life measurement, etc.
- Fifth, the dynamic analysis, the study of processes as well as the understanding of phenomenon in time have become leitmotivs in social sciences. In connection with these preoccupations, longitudinal survey and quantitative analysis methods have developed and play an increasing part in the research area. But the capability approach does not give precise guidelines on how time should be taking into account even if some authors argue that the assessment of capabilities should be dynamic. It seems important to investigate how to extent the informational base towards concerns with time and temporal aspect of working lives.

This course is an attempt to discuss some of these challenges. It aims at opening the black box of this research and providing as well discussing some reflexions about the modus operandi related to the investigation of working lives and professional pathways on the base of quantitative methods. This reflection will be situated within the literature that aims to advance this underdeveloped framework and will propose some reflections of its own emerging from the Capright research.

3. How to handle choice in a CA-oriented work on working lives?

Operationalizing the CA is the most important challenge that lies ahead for this approach, especially when we consider working lives in a dynamic way. There are endless criticisms addressed to the CA, which pose a set of challenges to its operationalization.

One of the main criticisms addressed to the CA concerns the non-observability of capabilities - since what someone could have done but is not doing is always counterfactual. Data limitations are constantly pointed out by Sen as a “substantial drawback”. As recalled by Comim (2001), “depending on the context, the informational basis needed may be approximated by data that is available. It seems that practical compromises are intrinsic to the counterfactual nature of the CA.” But Sen acknowledges that the capability set is not directly observable and argues that it is important to know what data in principle would be useful even though we may not able to get them. From a pragmatism point of view, Sen (1999) also proposes three alternative practical approaches: (1) the direct approach which consist in directly examining vectors of capabilities or functionings (2) the supplementary approach, which consists in supplementing traditional comparisons on resources by incorporating capability considerations, thus broadening the informational basis, (3) the indirect approach which consists in calculating resources adjusted by capabilities, like

adjusting income by equivalence scales (cf. Comim, 2001). As the choice of approach depends on the purpose of the examination and the available data, the direct approach is still the most accessible application of the capability approach. Still, a variety of uses are conceivable, concerning the scope of elements looked at, the comprehensiveness of their hierarchical ordering and also the decision between focussing rather on capabilities or functionings. The latter alternatives can be integrated via the frequently used concept of “refined functionings”, taking note both of the actual outcome and of the available alternatives in the context of decision (Sen (1987:36-37). *Schokkaert and Van Ootegem (1990), in a study on data for Belgium, try to capture the notion of freedom to choose, by the inclusion of refined functionings. The notion of refined functionings, with regard to developing countries, does not however appear to have been explored.* Nevertheless, refined functioning are a delicate concept because opportunities often focus on constraints, unfreedoms, penalties that people might face rather than on the scope of freedoms (Bonvin and Farvaque, 2007). Farvaque (2008: 63) also uses the concept of refined functionings as a way to empirically identify capabilities. He addresses the context of decision in order to infer what the “conditions of choice” were and to assess whether the final achievements are the result of a ‘free election’ or the result of any kind of constriction. On their side, Burchardt and Vizard (2007) suggest supplementing the analysis of outcomes with information in each domain on personal autonomy – that is, to compare the degree of choice and control individuals have in obtaining the outcomes.

To eliminate or to minimize subjectivity of judgement related to choice matters is at the core of the CA. The problem of adaptive preferences is one of the main concerns of the capability approach. As put forward by Sen (1985) and Nussbaum (2000), individual subjective views provide an inadequate informational space with regard to capability assessment. Whenever individuals become accustomed or conform to unfavourable circumstances that distort their preferences, their subjective views are considered unreliable as an information basis for normative assessment. With regard to this problem, Sen argues for assessing specific situations in order to identify the role played by social, environmental and personal conversion factors. Some quantitative applications taking into account process and opportunity aspect of freedom attempt to look at the transposition in and by companies of institutionally drafted rights in order to tackle conversion factors and resources offered by companies to their employees (Lambert and al. 2008, Sigot and Vero 2009). The empirical approach relies on a linked employer employee survey. Alkire (2005) clarifies various empirical instruments to explore how each might contribute to improved freedom measures.

The capability approach, while offering a normatively convincing answer to the key question of welfare economics: “inequality of what”, has somewhat neglected the crucial sociological question “equality of whom” (Zimmermann 2008: 123, 2006: 469). From a sociological point of view, the issue of “equality of whom?” seems crucial and is still to be addressed by the capabilities approach (ibid.). Sen is clearly not a sociologist – in his concept, persons remain abstract entities. If Sen deals with the differences in resources between individuals and also stresses the differences between individuals’ preferences or choices, based on goals, commitments or identity (2002), neither the situated action of individuals (its interactive and socially structured action) nor the role of power relations are taken into consideration. Yet the idea of dealing with different social groups that have different resources and preferences when analysing capabilities does not clash with Sen’s perspective. It is simply something that remains to be done.

3. How to address time in CA-oriented work on working lives?

According to Salais and Villeneuve (2005), in the field of working life “the central theme of a capability approach is the construction of a framework of active security to cope with work transformation and economic uncertainty”. As the capability approach is less attached to specific resources than to what people can do with them and as one and the same functioning can be achieved in different ways, “the capability approach is compatible with a specific understanding of the notion of security that is not attached to the job anymore but to the individual trajectory” (Corteel, 2005).

Nevertheless, the most part, literature on the CA has been limited to information spaces that are static. But sustainable developments like working lives are in fact dynamic and would be probably best understood in an evolutionary perspective.

3.1 The time dimension in the capability literature

Several papers address a question which has not been at the core of the reflection in the literature on capability: how to handle time? Recently Comim (2003) tried to go beyond the simple acknowledgement of importance of time and investigated “the implications of expanding even further the informational space forward by the CA towards concerns with time and temporal aspects to the CA”. He argued that becoming”, in addition to “being” and “doing”, is a key category of analysis and that this addition to the capability informational space is consistent with its emphasis on processes and the role of valuation activities.

Other authors address the time dimension explicitly with the objective of arriving at a renewed basis of judgement in the measurement of poverty and social exclusion. The main idea is to analyse whether the lack capability in certain dimension occurs for a number of periods in time (Comim and al. 2008). If relevant information is available across time, one would then be able to judge whether a person’s failure to achieve a minimally adequate level of capability in some dimension is just temporary or chronic. Papadopoulos and Tsakoglou (2008) echo the same idea when they develop an approach to the measurement of social exclusion using the CA. If deprivation in certain dimensions occurs for a number of periods in time, it constitutes social exclusion.

Another concern with time cumulative effects is the issue of path dependency according to people’s own histories and evolution, and specifically adaptive preferences. Using panel data from the British Household Panel Survey, Burchard (2003) studies subjective assessments of financial well-being at time t for individuals with a given income level, controlling for the income trajectory of the individual over the previous 1-9 years. The paper concludes that there is evidence of a process of subjective adaptation to material deprivation and that therefore subjective assessments of well-being are an inappropriate basis for judgements of inequality or social justice.

More generally, one may address the time dimension related to personal and collective conversion factors that play a fundamental role in Sen’s capability approach. Literature has highlighted what could be called cross-sectional variety amongst individuals and society and to the evolution of interpersonal differences over time in transforming resources into functionings (Comim, 2003). Other research analyses the scope of choice at time t in relation with the professional life course, considered as a functioning, using individual longitudinal survey data (Farvaque 2006; Vero 2002; Vero 2006) but the study of processes in time were not at the core of the analysis. It seems also central to go beyond this acknowledgment and

explore the way to expand the informational space put forward by the CA towards concerns with time and temporal aspects.

3.2 Toward a panorama of dynamic methods used to tackle longitudinal processes

In the past decades, the dynamic analysis, the study of processes as well as the understanding of phenomenon in time have received an increased interest. How can capability assessment learn from this literature? We'll here introduce dynamic methodologies that are commonly used in social sciences to grasp the influence of time. Longitudinal data have a fundamental characteristic: an information set through time. Such kind of data enables us to examine the studied phenomena which are in evolution. The data, on which focus, have also the characteristic of being individual data (that is to say not times series which are located at a macro level). There are several types of longitudinal data: first, retrospective data, where individuals describe past events, second prospective data (or panel data) where people give information to date, be people asked on a regular time or not, and third data from administrative records. The advantage of these data is to reflect the variability of a phenomenon according to individuals and time. Thus, from these data, it is possible to define the whole of observed phenomena that occur in time period, given the term of trajectory.

To sum up, two kinds of quantitative methods can be distinguished: econometric modelling and clustering, which can be used for different purpose as recalled by Grelet (2002). "Each of both approaches doesn't take place at the same time, and above all doesn't have the same goal... On the one hand, the econometric approach focuses on *an aspect of the trajectory* (wage, the number of jobs, the occurrence of an event, a transition, etc.). The main interest is to model the relationship between a variable of interest (a quantity, a probability, a risk, etc.) and some variables considered as explanatory variables. The typological approach aims at providing a first step to shape the trajectory itself in its entirety and without any reference to explanatory variables. Its purpose is *"to reveal hidden structures in all individuals"*, to improve the understanding of the variety of pathways, and to understand the complexity by providing a summary. Whether classes or factors, one would lead to instrumental variables. The study of links between the summary of the pathway so built and the explanatory variables appear later.

Hence, the main question is to know which element is to be favoured: a single event or more, the influence of time or not.? Of course, it is advantageous to be able to combine all these elements in order to provide a more relevant investigation, but it becomes also more complex. We can cite a few simple issues that the econometric methods can easily handle: the presence of an event or not, the duration of an event, the transition from one situation to another. Also, other questions can be solved by clustering trajectories: the succession of all events, the succession of all events, taking into account the time spent in each of them, etc. As the first examples are treated by various techniques such as models with qualitative dependent variable, event history models, the latter refers to transition models (econometric model) but also to data analysis techniques for characterizing a trajectory (the development of calculation of distance between individuals and then using methods to cluster). Three specific methods have emerged as particularly important from the literature based on quantitative analysis of longitudinal data. The issue at stake is to briefly present and discuss these methods. The first one –event history models- is a reference point in the

biographic analysis. The second one -the panel data model- is used to tackle individual events in a dynamic approach (the main goal is to capture individual heterogeneity). Finally, the stress will be put on the last one— clustering of trajectories-, where no longer assumption of independence of events will be assumed. On the contrary, a global dependence framework of all events with the characteristics is assumed.

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Using a combination of quantitative and qualitative approaches in a longitudinal way

Joan Miquel Verd

Session : Saturday 23 May, 8:00-14:00

Introduction

Changes in labour markets since the end of the economic crisis of the 1970s have produced a new scenario in which the relatively stable model of employment has been transformed into a much more “flexible” one. In this new scenario many of the jobs are unstable and atypical (temporary, part-time, with changing timetables, etc.) and job rotation is frequent. As a consequence of these changes in the employment model, professional (and family) pathways have changed their linear pattern and stability for a high degree of discontinuity and variability through the entire lifecycle (Alonso, 2007). Also, the greater individualisation of professional careers means increased chances to organise one’s life course (Périlieux, 2005), yet it also means a substantial rise in the risks of (or vulnerabilities to) failure (Beck, 1992), and thus a closer connection between work and poverty than in the past.

As mentioned previously in this booklet, possibly the best way to evaluate to what extent the social protection systems are adapted to a labour market that produces increasingly unstable and changing pathways would be by taking a longitudinal perspective. As Rubery has noted (2004:1), “one of the best ways to conceptualise and consider both the differences in current models [of social protection] and the pressures under which they are placed for change is to view these models through the lens of a lifecycle approach”. When this has been accomplished, the applied perspective is methodologically close, to differing degrees and in different ways, to the life course approach (one of the strands inside the biographical perspective). However, the qualitative approach to biographic analysis is quite ignored. Most of the empirical research carried out until nowadays combine documentary analysis (focused on the regulatory factors) with a quantitative approach (based on either the analysis of cohorts or the analysis of the main statistical aggregates). In a combined resource-capability approach this methodological devices are insufficient. As Zimmerman has pointed out (2006: 477), “[i]f one is interested in grasping the different dimensions of capabilities, including conversion processes and what people value, a comprehensive and qualitative moment is required, at least as a complement to other methods”. A quantitative approach combined with the analysis of secondary documentation – as a way of identifying the normative and institutional aspects – allows us to properly address the resources available to people as well as the conversion factors and even the set of capabilities or options that they give rise to. However, it is extremely difficult to infer in this way which were the choices made by the individuals, and it is even more difficult still to find out the reasons for these choices.

The combined use of quantitative and qualitative data in biographical research

The use of qualitative data in biographical research puts individuals and their practices and experiences (along with all the pertinent contexts) at the heart of the analysis. Plus, it allows

us to examine the reasons why individuals act, often a blurry realm, the cross between the objective and the subjective, which cannot always be linked with the concept of choice.¹

Another advantage of using life stories is the possibility of relatively easily identifying the points of biographical rupture or turning points that are important for the individuals. The ideas of crossroads, fork in the road or “point of no return” are constant features of biographical stories. As Leclerc-Olive reminds us, “in biographical stories, events are often moments of intermediation, ‘forks in the road’” (1997: 31); for his part, Lahire points to the importance of “making subjects talk about times of ‘biographical rupture’, of changes or modifications, even slight ones, in the pathways or careers [...] given that they are the times when arrangements might be *called into question* or might suddenly be *reactivated* whereas until that point they had been in a *vigil state*” (2002: 30-31, with emphasis in the original). One of the consequences of this mapping of one’s biography around “key points” is the possibility of describing the biographical pathway as a set of chained *biographical events* – in the sense that Leclerc-Olive (1997) and Legrand (1993) understand this term. This enables a relative simplification of the trajectory that isolates these events or biographical points in order to subsequently reconstruct the “backbone” of the narration by means of piecing them together. Later, we can identify which resources the person had at their disposal and what set of options were available to the individuals at those times that make up the backbone of the biographical story.

Yet there is no question that biographical stories are not enough if we wish to address all the dimensions in a methodological approach to the research inspired by the capacities approach. People are not always aware of the more structural elements affecting their actions, nor of the resources may they have at their disposal or the conditions of access to resources.

This kind of information is even more important if the goal is to compare different societal realities. As Bynner has pointed out, talking specifically about the transitions between education and work, “in all countries the rates and forms of transition are strongly dependent both on *institutional factors* (how the transition from school to work is managed) and on *structural factors* such as social class, gender, ethnicity and locality” (2005: 372; with italics in the original). That is, we need an approach that enables us to situate the life stories within particular social and institutional contexts, and this is much easier to do using aggregate statistical information.

Therefore, both quantitative and qualitative data is crucial to rightly approach all the dimensions affecting life trajectories, especially if the final aim is making comparisons between different countries. Bynner and Chisholm (1998) have summarily pointed out the problems of exclusively using either quantitative or qualitative data when making international comparisons of life transitions: “Thus national cohort and cross-sectional survey studies will confront problems of interpretation of differences (and similarities) across countries, and biographical and ethnographic studies will confront questions of representativeness and generalizability” (1998: 146). The solution to this dichotomy seems obvious: combining both types of data. In short, as authors such as Thompson (2004) and Elliott (2005) have pointed out, biographical research is only strengthened by using both quantitative and qualitative data.

¹ The development of events in a given pathway might obey both circumstances external to the subject and goals or desires existing within the agent him/herself. Shütz (cited by Bertaux, 1997: 75) calls the first type of reasons *because*, and the second type of reasons *in order to*.

Combining makes sense as long as there is what some authors have called the *fundamental principle* of multi-method designs (Teddlie and Tashakkori, 2003: 16): “Methods should be mixed in a way that has complementary strengths and non-overlapping weaknesses”. As we see, the possibility to obtain the maximum of the integration of methods implies giving special attention to the design of the study, given that it is important to find out what purpose each type of information serves. This issue shall be addressed in the following section.

Design issues in the combination of quantitative and qualitative data

Of all the works that have recently attempted to classify the different possibilities of combining quantitative and qualitative methods, the best known is possibly that of Creswell (2003; Creswell, Plano-Clark, Gutmann, Hanson 2003; Creswell, Plano-Clark, 2007). This author distinguishes six essential types of mixed design based on four main dimensions: implementation, priority, integration and theoretical perspective.

In relation to the implementation, which refers to the sequence with which the researcher obtains the quantitative and qualitative figures, Creswell considers three options: a) data collection with no type of sequence, which is therefore concurrent; b) sequential data collection in which the qualitative data are obtained first; and c) sequential collection in which the quantitative data are obtained first.

In relation to the priority, Creswell refers to the emphasis or weight given to quantitative or qualitative data in the research process. Here the author considers three possibilities: a) equal emphasis; b) priority given to qualitative data; and c) priority given to quantitative data.

Creswell defines integration as “the combination of quantitative and qualitative research within a given stage of inquiry” (Creswell, Plano-Clark, Gutmann, Hanson 2003: 220). He (Creswell, 2003: 212) insists that integrating means mixing the data —this is possibly one of the key elements of Mixed Methods— and not only collecting both types of data. This mixture or integration may occur in four different ways: a) in obtaining the data, for example by including open and closed questions in a survey questionnaire; b) in the analysis of the data, for example by transforming qualitative information into quantitative information; c) in the stage of interpretation of the data, so the data are analysed separately and the two types of information are only integrated in the stage in which the data are given theoretical meaning; and d) in multiple stages, which involves a combination of the above possibilities.

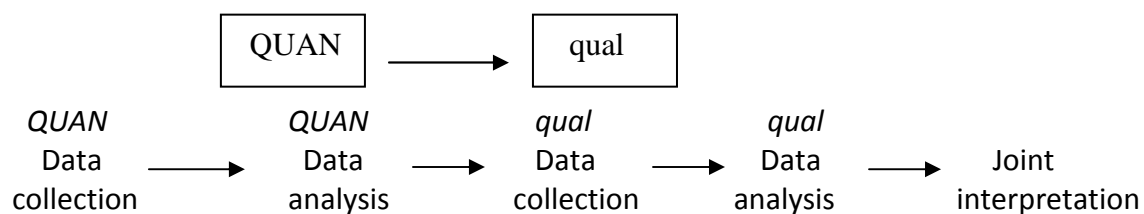
Finally, the theoretical perspective refers to whether the theoretical framework —or “theoretical lens” as Creswell calls it— is made explicit in the research undertaken. He considers two possibilities: a) that it is explicit; and b) that it is implicit. It is debatable whether this dimension is really useful as a classification element, firstly because it goes beyond the strictly methodological field, and secondly because it would make far more sense to consider the specific theoretical perspective that is adopted rather than whether it is explicit or not. In practice this dimension refers to the proposal of Greene and Caracelli (1997) according to which the transformative theoretical model is the most suitable for studies based on mixed methods, and to their suggestion that this theoretical model is always made explicit in mixed designs. As seen above, in real research practice it makes little sense to assign a type of theoretical perspective or paradigm to a specific type of design. For this reason we will not take this dimension into account in the classification that we present.

The six main designs into which Creswell divides strategies based on mixed methods (or a mixture of methods) are: a) sequential explanatory; b) sequential exploratory; c)

sequential transformative; d) concurrent triangulation; e) concurrent nested; and f) concurrent transformative. We explain here just those designs that have a sequential character. We will do so because they are the only designs where the results obtained with one method can be used to better improve a second stage of field research. This was the rationale that was behind the idea of combining methods in the WP3 approach. Of course, this is not the only benefit, as in the final interpretation both quantitative and qualitative data are used, and therefore one can gain a better insight of the object under study, in the line of the already mentioned advantages of using both quantitative and qualitative data².

According to Creswell, the sequential explanatory design (figure 1) is the clearest design of the six main types of mixed methods. It is characterised by the collection and analysis of quantitative data followed by the collection and analysis of qualitative data, with priority being given to the quantitative data. The two methods are integrated in the stage of interpretation of the research.

FIGURE 1. SEQUENTIAL EXPLANATORY DESIGN

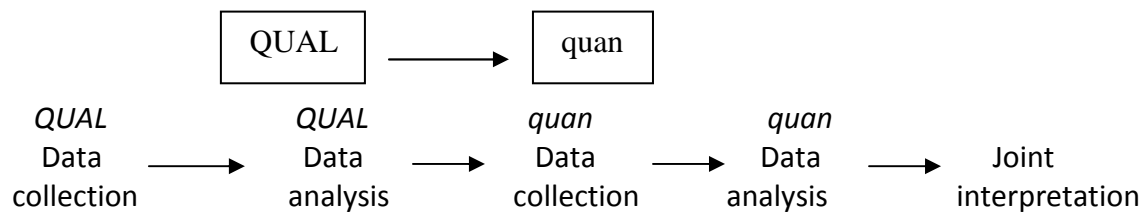


The habitual aim of this type of design is to use the qualitative results to help in the explanation and interpretation of the results obtained with the quantitative data. However, a first quantitative stage can be used to better identify the relevant population for a given phenomenon. In this latter case, the stress is not on quantitative data but on qualitative data and thus the upper case should be reversed (to show a higher priority of qualitative data). The main problem of this design, as noted by Creswell, is its duration, because it has two clearly differentiated stages.

This sequential exploratory design (figure 2) gives priority to the qualitative data as a means of exploring a given phenomenon in detail—which does not mean, as Miles and Huberman recall (1994), that this is the only potential of an initial qualitative stage. Later, the quantitative stage allows one to determine to what extent the phenomena observed can be generalised to the whole population or to know the distribution of the phenomena among the population. Again the priority of data could be reversed and the priority given to quantitative data in the second stage. In this latter case the first qualitative stage is used to better develop the quantitative phase, which is the main source of data. As in the sequential explanatory design, the data are interpreted together. Also as in the previous design, the main problem is the duration of the study, as it is organised in the form of separate qualitative and quantitative stages.

² The type of notation that we use already has a certain tradition in *mixed methods*. An arrow (→) indicates a sequential form of data collection and a plus sign (+) indicates a simultaneous form. The terms “quan” and “qual”, indicate the use of quantitative or qualitative data and upper case indicates higher priority of the data type. The boxes refer to data collection and the rest of the elements on the charts develop with greater detail the set of tasks that arise in a research process.

FIGURE 2. SEQUENTIAL EXPLORATORY DESIGN



In both sequential designs there is a combination of intensive (that is, qualitative) and extensive (that is, quantitative) information. Years ago, De Waele and Harré pointed out the logic of both types of information (1979: 190): “intension varies inversely as extension”, that is, the more in-depth an individual is studied, the fewer individuals can be studied. As Sarabia (1985) points out, the ideal in an extensive design would be to examine all the individuals from a single class, and when this is impossible to use a sample from which the researcher derives a type via averages of characteristics derived from his/her sample. Intensive design means examining thoroughly a typical member, and then identifying the extension of the class by means of setting the common properties shared by other members.

In order to make the most of the advantages of both types of data, it is necessary to identify a typical member included in a given extension. Once the subject has been identified, it could be subjected to an intensive examination which would enable us to gain detailed knowledge of the type³. Obviously, this logic is based on the supposed homogeneity of the extension from which the type is extracted. This procedure is the one that in practice has been used in numerous biographical studies performed by Thompson (2004), as well as in the classic study by Sheldon and Eleanor Glueck published in 1950 called *Unravelling Juvenile Delinquency*, although in this case the initial sample of 1,000 boys was not statistically representative⁴ (Sampson and Laub, 1993).

Nevertheless, in numerous studies it is not possible to extract from a statistically representative sample a smaller sample to which we can apply qualitative data gathering techniques (in our case, biographical interviews). In these cases, not having a known homogeneous extension from which to extract the cases to be analysed in detail means that a purposive selection of cases is needed.

Both Flyvbjerg (2004) and Yin (1994) have outlined a set of criteria that may help in this selection. To simplify, these authors set forth three main criteria that justify the selection of the cases for a qualitative analysis. The first criterion is *critical* in nature. According to this criterion, the case (or cases) is chosen because he/she perfectly represent the characteristics of the population that one wants to study. In short, this is a form of typological representativeness that must be based on in-depth knowledge of the setting, on the consideration of factors that might produce heterogeneity and on the drawing up of typologies based on the aforementioned factors of heterogeneity (Lago, 2008: 45). The second criterion is the one that justifies the choice of the case due to its *extreme* or unique

³ Although in the following paragraphs we speak about designs where the quantitative data is gathered first, the comments could be perfectly applied to those designs where the first stage has a qualitative nature. See note 4, where an example of this latter case is explained.

⁴ In reality, the Gluecks' study was based on the “quantification” of the qualitative information gotten in interviews with the 1,000 boys mentioned. In this case, the qualitative information was prior to the existence of the quantitative register. What Sampson and Laub (1993) do is revisit the analysis of the qualitative information that already exists in those cases that do not end up fitting within the patterns detected by means of the quantitative analysis.

nature. In these cases, the representativeness is not typological; rather a case is chosen precisely because it does not display the characteristics that it purportedly should display given the typology drawn up. These are cases that behave differently from what is expected or that depart from the norm. These cases enable us to prove the validity of the inferences made for the entire set of a given profile, as well as to identify to what extent certain factors that may not have been taken into consideration at first may have effects on the phenomenon being studied. The third guideline applicable is the one based on the criterion of *maximum variation* in a single dimension. By this we mean choosing cases following the criterion of critical nature but seeking variation in one of the characteristics whose relevancy we would like to verify. It is important to point out that in all these situations of purposive selection, there is no correspondence between the units for which one has statistical information and those chosen qualitatively. There is only a correspondence on the level of populations as a whole, but not on the level of units.

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