The Life Courses of Young Adults in France: Changes in Social and Gender Differentiation over the Long Period

Nicolas Robette*

Abstract – This paper examines the life courses of young adults in France, the differences between courses according to gender and social background, and their evolution. The study is based on the *Santé et itinéraire professionnel* survey (a survey on health and professional career conducted by DREES and Dares), which provides information about courses between the ages of 14 and 35 for individuals born between 1932 and 1975. A traditional threshold approach is complemented by the use of optimal matching methods. The evidence shows that leaving the parents' home is more associated with the family sphere than the professional sphere and that the family and professional spheres are not significantly correlated. The impact of social background on life courses has increased since the late 1960s and is more pronounced in the family sphere for women and in the professional sphere for men. Gender differences have decreased. Finally, there is no clear trend towards a de-standardisation of life courses. On the other hand, courses appear to be becoming increasingly complex.

JEL Classification: C19, J12, J13, J62 Keywords: youth, life courses, sequence analysis, social classes

Reminder: The opinions and analyses in this article are those of the author(s) and do not necessarily reflect their institution's or Insee's views.

* GENES-ENSAE, CREST-LSQ (nicolas.robette@uvsq.fr)

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hile interest in youth has been a relatively late development in the field of French sociology, there has been a proliferation of research on young people over the last few decades, including from a quantitative perspective. As a "new phase of life", youth is often viewed as a transitional phase between childhood (or adolescence) and adulthood – a transition that occurs in the family and the educational and professional spheres (Galland, 1990). The transition involves crossing social thresholds that "represent different stages of life" - completion of education, access to employment, leaving the parental home, partnering (or marriage) and having a first child linked to "learning the social roles corresponding to entry into these new statuses" (Galland, 2009).

The focus here is on the changes and developments in the life courses of young adults in France and the differences according to gender and social background. Has the expansion of female education and women mass entry into the labour market paved the way for the standardisation of female and male life courses? Or, on the contrary, are there still differences according to gender and, if so, are these differences the same regardless of social background? Has the institutionalisation of life courses led to a process of standardisation? Has the individualisation seen over the past few decades had an impact on this trend? Do these trends vary by gender and social background? In this paper, these questions will be addressed using the Santé et itinéraire professionnel survey (a survey on health and professional career carried out by DREES and Dares - the statistical services of, respectively, the French Ministry of Health and Social Affairs and the Ministry of Labour), which provides information about life courses between the ages of 14 and 35 for individuals born between 1932 and 1975. Optimal matching methods are used to complement a traditional threshold approach by studying life sequences rather than events.

The article is organised as follows: Section 1 presents the different sociological approaches to the transition to adulthood. Section 2 describes the methods and data used. The results of the empirical analyses are then presented in Section 3, which examines the question of sequences, while Section 4 focuses on changes and developments.

1. Approaches to the Transition to Adulthood

Much of the existing empirical research on the transition to adulthood is based on the study of

thresholds. The advantage of this approach is that it allows relatively simple comparisons to be made of the characteristics of the transition to adulthood in time and space once the events that need to be taken into account have been determined. A number of studies have highlighted the diversity of European models (Chambaz, 2000). For example, southern European countries, where young people tend to leave their parents' home at a relatively late stage, contrast with northern countries, where leaving the parental home happens earlier. The key factor contributing to the variety of ways in which autonomy is attained is to be found in the social, cultural and institutional models at work, ranging from the Mediterranean family model to the Nordic public model (Van de Velde, 2004). Other studies have emphasised the postponement of entry into adulthood in France, as well as the desynchronisation of family (first partnering, first child) and professional thresholds (Galland, 2000). Postponed access to residential and/or economic independence is linked to prolonged education and the increasingly advanced age at which people enter working life. What has emerged is an intermediate period between leaving adolescence and entering adulthood, which may be seen as a period of gradual preparation for adult roles. More generally, western societies have seen the simultaneous development of a standardisation of pathways to adulthood - with an increasing compactness of threshold ages - and their individualisation - with an increasingly diverse sequence of threshold crossing (Shanahan, 2000).

1.1. The Limitations of Studying Thresholds

However, the study of thresholds has several limitations. The approach generally obscures the fact that certain statuses and situations are reversible and that certain events may never be experienced by individuals, as well as highlighting the difficulty of accurately defining what a transition actually is. For example, leaving the parental home has become an increasingly complex process (Goldscheider et al., 1993; Villeneuve-Gokalp, 1997). The transition to full residential independence can be a gradual process: while the age at which people leave the parental home has remained relatively constant, the move to independent housing tends increasingly to happen at a later stage in life (Villeneuve-Gokalp, 2000). It can also be a reversible process, with one out of five departures being temporary, i.e. followed by a return to the

parents' home¹, generally because of employment difficulties (Villeneuve-Gokalp, 2000). New residential situations and statuses have emerged, such as dual residence (i.e. living with one's parents while being away from home more than half the time), a trend explained in particular by the fact that people remain in education for longer periods of time and by the later stage at which people access stable employment and financial independence (Villeneuve-Gokalp, 2000). The distinction between 'leaving home' and 'living away from home' (Buck & Scott, 1993), or between absence, autonomy, decohabitation and independence, raises the problem of defining the key markers or milestones.

In the marital sphere, the number of marriages has declined since the mid-1970s. Furthermore, the number of unions started outside marriage is on the decrease (Prioux, 2005). Moreover, while cohabitation has long been a transitional phase towards marriage, only 19% of women whose first partnering began between 1993 and 1997 got married after two years (Prioux, 2005). In other words, marriage is no longer the fundamental marker of conjugality. However, cohabitation is not the only alternative marital status to marriage. A not insignificant proportion of couples do not cohabit (Régnier-Loilier et al., 2009). As in the case of decohabitation, the definition of the first partnering as a transitional threshold to adulthood is not unequivocal. Moreover, the reversibility of relationships is tending to increase. The divorce rate is on the rise (Prioux, 2005), and it is therefore becoming increasingly common for people to experience several unions over the course of their marital life (Rault & Régnier-Loilier, 2015).

Finally, in the professional sphere, the emergence - especially since the late 1970s - of particular forms of more or less precarious employment (fixed-term contracts, temporary work, internships, subsidised employment, forced part-time work, etc.) challenges the relevance of identifying access to a first job as a marker. At a time when more than 90% of newly hired workers are on fixed-term contracts or temporary assignments (Barlet & Minni, 2014), occupational integration is not necessarily instantaneous, but is instead a gradual and even chaotic process (Barret et al., 2014), suggesting that "stable" employment may be a better marker of the transition to adulthood. However, the definition of employment stability is not unambiguous² when redundancy and dismissal (i.e. reversibility) are always a possibility.

Another limitation of using thresholds lies in the methodological difficulty of understanding

the link between the different spheres of life courses. By focusing on one or two thresholds simultaneously, the entire course of the trajectory and the sequence of events that punctuate it tend to be obscured. However, English-language scholarship based on life course analysis has long emphasised the importance of the sequence of transitions to adulthood beyond the question of their timing, the aim being to understand the subsequent life course (Hogan, 1978; Marini, 1984; Rindfuss et al., 1987). For example, early motherhood has neither the same meaning nor the same implications depending on whether or not it is the first of the transitions to adulthood, before decohabitation and access to employment (Testenoire, 2006). Some researchers posit the existence of a normative order for thresholdcrossing (Elder, 1974) and seek to measure the consequences of deviations from the norm on the rest of the life cycle (Hogan, 1978).

In addition, thresholds are often studied using indicators of central tendency such as median ages. By reducing the (greater or lesser) diversity of individual cases to a single statistical standard, we run the risk of artificially constructing an "average youth" and reifying a category that then becomes the "constant cause" of the central tendency observed (Desrosières, 2002, p. 4). The "measurement" of transition thresholds is sometimes accompanied by the use of the "language of variables" (Desrosières, 2001, p. 124), the idea being that it is the age at which decohabitation occurs that is increasing rather than the fact that members of a given social group are leaving the parental home increasingly late.

1.2. Social and Gender Differentiation of Courses

The difficulties of studying transition thresholds increase when taking a historical approach, with relatively significant temporal depth, and when the focus is on the differentiation of life courses among distinct social groups. Changes affect individuals in distinct categories differently since the stages marking life courses "are subject to different conditions and challenges depending on gender, social background and the level of education" (Battagliola *et al.*, 1997, p. 86). For example, among women, leaving the parental home may

^{1.} Sociologists and the media in the English-speaking world sometimes refer to 'boomerang kids' (Mitchell, 2006).

This is illustrated by the range of choices made in major official statistical surveys: Insee's Jeunes (Youth) survey (1992) identified jobs lasting more than one month, while the Santé et itinéraires professionnels survey (DREES-Dares, 2006-2010) identified jobs lasting more than five years.

involve two different social logics (Blöss *et al.*, 1990). The first is that decohabitation coincides with social autonomy through the conjugal route, as part of a process of reproduction of the original family model. The second logic implies a more iterative process of decohabitation, with possible returns to the parental home, autonomy linked to school and professional certification, and access to higher social positions.

The departure "calendar", i.e. the time at which people leave the parental home, also bears the mark of social differentiations, which vary in different periods. At the beginning of the 20th century, leaving the parental home at an early age, a process associated with obtaining a first job, was primarily a feature of the working classes, while children from middle-class backgrounds tended to experience a prolonged period of cohabitation (Prost, 1987). By contrast, at the end of the century, young people from the upper classes and, to a lesser extent, from the middle classes were those who left the parental home the earliest (with possible returns), often to pursue their studies. Meanwhile, young people from working-class backgrounds have increasingly tended to live longer with their parents, in part because of job instability (Galland, 1995). Decohabitation has changed qualitatively (Blöss et al., 1990).

Beyond the simple transition that is leaving the parental home, Battagliola *et al.* (1997) showed, for the 1952-1966 generations, that the differences between the life courses of young women and young men tended to diminish in the classes with the highest levels of social and educational capital but to increase in the more humble classes with less educational capital. However, these results are based on the notion of events, which, as the authors concede, can be problematic since "clearly identifiable and precisely dated transitional thresholds tend to be replaced by transitions with more blurred and de-ritualised boundaries" (*ibid.*, p. 87).

These various findings suggest "abandoning the search for border events which, upstream, separate youth from childhood [...] and, downstream, mark the beginning of adulthood" (Mauger, 1995, p. 24).

1.3. Changing Life Courses in the 20th Century: Some Conceptual Clarifications

In developed countries, the first part of the twentieth century saw a general trend towards the "institutionalisation of the life course" (Kohli, 1989). The transformation of the work system led to a tripartition of courses and trajectories, divided into a period of preparation, a period of activity (work) and a period of retirement, with adulthood standing as the pivotal point of the model. The origin of this shift is to be found in the transition from an economy based on domestic production to an industrial market economy centred around contract and wage labour. The institutionalisation of life courses and pathways covers three dimensions (Kohli, 1989). First, life becomes safer and more predictable. For example, increasing life expectancy means that people tend to die within a narrower age range, implying a shift "from an unpredictable regime of death to a regime of predictable length". A personal development code (or project) then becomes central to the life course. Social control becomes internal rather than external, and individuals live their life by internalising constraints, taking the long 'biographical' view (Elias, 1973). Finally, courses have tended to evolve towards a standardisation (or normalisation) of courses, with the emergence of a chronological sequence composed of clearly defined stages. The structuring of courses and pathways according to age emerges as a socially constructed process on account of the legal and administrative organisation of society, institutions and the State: what we see is a 'bureaucratisation' of ages (Bozon, 2009). School and education play a central role in this process, defining and standardising stages and gradations in which age acts as the main selection criterion and which are imposed on the entire youth population (Chamboredon, 1991), thereby helping to "crystallise social definitions of ages" (Bessin, 1994). Legal dividing lines, such as civil and criminal liability and voting rights, also characterise the period of youth. Likewise, at older ages, the pension system marks the boundary between the period of activity (work) and the period of old age, which are both structurally and chronologically distinct. As a result of these factors, life courses have become relatively more predictable and standardised.

Alongside this long-term trend, the 1960s and 1970s saw the development of a phenomenon of individualisation of life courses. According to Bessin (1994), the social changes at work within the family and professional spheres led to a "crisis of the industrial temporal culture". Access to higher education expanded massively, benefiting especially women, who have come to play an increasingly significant role in the labour market. The spread of contraception allowed for greater fertility control. As women became more independent, production and reproduction become intertwined, causing gender relations to change. The organisation of wage labour has also changed, shifting increasingly towards deregulation. Mobility, flexibility and precariousness are on the increase. Ultimately, the social order, hitherto based on a rational and chronological model, has come to be characterised by "the diversity and entanglement of social times, by polychrony" (Bessin, 1994). As a result, life courses have become less linear, less predictable, less conventional and less socially structured, but also increasingly characterised by individualisation and a plurality of choices, uncertainty and reversibility in both the family and the professional spheres (Shanahan, 2000).

While the shift towards the institutionalisation and individualisation of life courses may seem contradictory, the two trends are not in fact mutually exclusive. For example, the timing of certain transitions became more uniform over the course of the 20th century, although their sequence also became more diverse, as illustrated in particular by entry into adulthood (Shanahan, 2000).

Scholars have noted that the abundant literature on the historical changes affecting life courses suffers both from a lack of empirical data to test the proposed hypotheses and from a degree of conceptual vagueness (Brückner & Mayer, 2005). To make the changes objectifiable on the basis of empirical data, operational definitions of a number of key concepts have therefore been proposed. The institutionalisation of life courses refers to the process by which normative, legal and organisational rules come to define the social and temporal organisation of life. The welfare state offers an increasingly wide range of social statuses and progressive episodes (maternity leave, etc.). Conversely, "de-institutionalisation" means that states, stages, events and transitions that were previously clearly differentiated are now integrated or merged - for example, having a job when studying (rather than after completing one's studies). The standardisation of the life course is the process by which statuses or events and their sequence become widespread (e.g. women's paid work) or their timing becomes more uniform. By contrast, if social statuses, events and their sequence concern a smaller part of the population, occur at more dispersed ages or are of more varied duration, the term used is de-standardisation. According to Brückner & Mayer (2005), the diachronic concept of course

differentiation refers to a process in which the number of statuses or stages in the course of one's life increases. In other words, the first years of life are increasingly differentiated institutionally because of their division into an increasing number of periods: nursery, kindergarten followed by primary school, secondary (including middle and high) school, higher education, etc. De-differentiation refers to the merging of previously distinct periods. There is no obvious example of this, suggesting the irreversibility of differentiation. Pluralisation refers to the increase in the number of simultaneous statuses or forms of activity among a population or even in a given person. The concept is generally used to describe the family sphere, as illustrated, for example, by the increasing prevalence of de facto (or free) unions and divorce. Finally, individualisation is a more interpretive concept, emphasising the greater control that individuals have over their lives, a process at the root of many of the previously defined processes.

In what follows, I will be drawing on this important work on the operationalisation of concepts and their translation in the form of statistical tools (Elzinga & Liefbroer, 2007).

2. Method and Data

2.1. A Life "Sequence" Approach

To avoid the aporias of an approach to youth in terms of transition thresholds, an alternative is to look for "stable processes" by viewing youth as the stage of life defined by "entry into the labour market and the marriage market" (Mauger, 1995, pp. 24–25). This definition has the advantage of being sufficiently broad to allow comparisons in time and social space, i.e. both diachronic comparisons (between different periods of time) and synchronic comparisons (e.g. by gender or social class).

Empirically, adopting this perspective implies no longer using events as a unit of analysis but rather processes as a whole, taken as indivisible entities.³ From the point of view of statistical methods, a sequence analysis approach can be used (see box), with sequences being defined as ordered successions of social positions. In other words, by taking into account, for each

^{3.} What Billari (2001) proposes to call a "holistic" (as opposed to an "atomistic") approach to life courses.

individual, the series of "situations" or "statuses" experienced by that individual, we are able to (partially) solve the problems raised by the definition and reversibility of thresholds and by the sequencing of each course. Moreover, technically it is easy to consider that each "situation" is in fact a combination of positions occupied in different institutional fields (family, education system, productive system, etc.), a "non-decomposable set of attributes" (Chamboredon, 1985, p. 27),

Box – The Statistical Analysis of Sequences

The basis for the proposed statistical analyses involves applying optimal matching analysis (OMA) methods to the data from the SIP survey. OMA is based on dynamic algorithms initially used primarily in molecular biology to study DNA sequences. OMA methods were later introduced into the social sciences by Andrew Abbott in the 1980s (Abbott & Forrest, 1986). The basic idea of OMA is to measure the dissimilarity between two sequences by properly quantifying the effort necessary to transform one sequence into the other one. The transformation can be performed by means of three basic operations: insertion (an element is inserted into the sequence), deletion (an element is deleted from the sequence) and substitution (one element is substituted for another). A specific cost can be assigned to each of these basic operations. A series of operations has a cost equivalent to the sum of the costs of the basic operations used. The distance between two sequences is then defined as the minimum cost of transforming one sequence into the other, with dynamic algorithms ensuring that this minimum cost is obtained (Sankoff & Kruskal, 1983). The end result of the optimal matching of all the pairs of sequences of a corpus is a distance matrix.

There are many other methods for measuring the dissimilarity between sequences (for a review, see Robette, 2011). However, the possibility of configuring the calculations by choosing the costs of the basic operations means that OMA has the advantage of being hugely flexible, enabling it to be adapted to the object under study by adjusting the weight given to different dimensions of time, such as timing, duration and sequencing (Lesnard & Saint Pol, 2004). In addition, systematic comparisons have shown that most methods yield relatively similar results, especially when applied to empirical social science data (Robette & Bry, 2012; Studer & Ritschard, 2016).

The distance matrix between all the individual courses obtained by OMA can then be analysed in several ways.

1) Different distance matrices (e.g. family courses versus professional careers) can be compared by measuring their degree of association using the "RV coefficient", which is a generalisation of the Pearson correlation coefficient (Robert & Escoufier, 1976). The coefficient takes a value between 0 and 1, and the stronger the association, the closer the coefficient is to 1.

$$RV(X1, X2) = \frac{Tr(X_1X_1X_2X_2)}{\sqrt{Tr(X_1X_1X_1X_1)}Tr(X_2X_2X_2X_2)}}$$

2) By grouping the most similar sequences together, a typology can be obtained using automatic clustering methods such as hierarchical agglomerative clustering

(for example). From an analytical point of view, the idea is not to limit oneself to identifying "modal sequences, i.e. the sequence determined according to what is most likely in each class, of access to different attributes" (Chamboredon, 1985, p. 21), but to construct a space of biographical possibilities.

3) Other data reduction methods may be used, including multidimensional scaling (see Kruskal & Wish, 1978), which, in a similar way to principal component analysis for example, can be used to transform a distance matrix into an *N*-dimensional space: statistical individuals are assigned coordinates in this space, with each axis being orthogonal to (i.e. independent from) the others and whose first axis "explains" a greater proportion of the heterogeneity of the data than the second, whose second axis explains a greater proportion than the third, and so on and so forth.

4) The distance matrix can be used as a "dependent variable" in an analysis of variance (Studer *et al.*, 2011). It is then possible to assess the proportion of variance (of the distances between sequences) explained by one or more dependent variables.

5) Finally, it is possible to simply study dissimilarity (i.e. heterogeneity) within social groups – i.e. the diversity of sequences for each group – or between social groups – i.e. the extent of differences in courses between these groups.

Sequence analyses that do not require calculating a distance matrix are also used in this paper. Sequence complexity measures operate directly based on courses coded as sequences. The most common of these, known as "turbulence", is based on the number of distinct subsequences in the string and on the variance of the durations of each state (Elzinga & Liefbroer, 2007):

$$T(x) = \log_2\left(\theta(x) \cdot \frac{s_{t,max}^2(x) + 1}{s_t^2(x) + 1}\right)$$

with $\theta(x)$ the number of distinct subsequences that can be extracted from the sequence of successive states, $s_t^2(x)$ the variance of the durations in the successive states of the sequence, and $s_{t,max}^2(x)$ the maximum value that this variance can take into account for the length of the sequence, which is obtained as follows:

$$s_{t max}^2 = (d-1)(1-\overline{t})^2$$

with d the number of distinct states in the sequence, and \overline{t} the average consecutive time spent in the different states.

and thus to incorporate the intertwining of the different biographical spheres into the analysis.⁴

2.2. Data

For the empirical analyses, the paper draws on the *Santé et itinéraire professionnel* (abbreviated to SIP) survey, conducted jointly by the statistical directorate of the Ministry of Health and social affairs (DREES) and the Ministry of Labour (Dares). The survey collected biographical data on the work, employment and health of individuals living in ordinary households in metropolitan France and aged between 20 and 74 at the time of the survey, with the respondents being surveyed in two waves, the first in late 2006-early 2007 and the second at the end of 2010. The sample consists of 11,000 individuals.

The life history calendar of the questionnaire is used to reconstruct, year after year, the life course of respondents since the age of 14. First, it captures the year in which individuals moved into their first independent home, although no other information is available on the residential course, which is therefore reduced to a single and irreversible event by construction. The calendar also captures the years of partnering (or re-partnering) and separation, as well as the years of birth (or adoption) of respondents' children. Finally, the year of completion of initial education is known, as well as any periods of military service, of employment lasting five years or more, of short-term employment (employment of less than five years, unemployment or inactivity of less than one year), of unemployment of one year or more, of parental leave, of retirement or early retirement, of sick leave of more than six months, of training and other periods of inactivity of one year or more.

Ultimately, data were available on the life courses between the ages of 14 and 35 of 5,066 women and 4,229 men born between 1932 and 1975. The decision to focus only on those aged over 35 was based on a trade-off between sample size and the length of courses. In other words, widening the window (up to the age of 40, for example) would have reduced the sample without providing a significant amount of additional information since most of the events that mark the "double transition" are known to occur before the age of 35. Life courses combine four dimensions: the residential dimension, coded in two states (never having lived in an independent dwelling, having already lived in an independent dwelling); the marital

dimension (two states: single, in a couple); the parental dimension (four states: without children, one child, two children, three or more children); and the professional dimension (five states: student, in long-term employment, in short-term employment, unemployed, other inactivity).

2.3. Coding of Social Background

To characterise respondents' social background, information on their father and mother, including education, socio-professional category and, where applicable, the number of permanent employees of the company, was used. The socio-professional category is based on level 1 of Insee's classification of socio-professional categories (CSP), with the exception of two groups, with executives and intellectual professions and intermediate occupations being grouped together, albeit by distinguishing between members belonging and not belonging to the sphere of education. We thus obtain a group composed of "executives, intermediate occupations (other than teaching), technicians, liberal professions" (group 3) and a group composed of "teachers, educational managers, primary school teachers" (group 4). Social background is divided into three classes: "peasant", "blue-collar", "upper". Respondents are considered to be of upper-class origin if at least one of their parents belongs to the upper classes, i.e.: if their father or mother belongs to either the farmer or business owner categories ("farmer, family helper in agriculture" or "craftsman, tradesman, business owner" with at least three permanent employees), or if they belong to groups 3 or 4 as defined above and have a level of education at baccalaureate-level or above. Respondents are considered to be from a blue-collar background if their father is a blue-collar worker and their mother is an employee, a blue-collar worker or inactive, and of peasant origin if their father is a "farmer or

^{4.} Furthermore, in the social sciences, the process of the double transition to adulthood has been given multiple labels, such as pathway, course, trajectory, career and biography. Drawing on the conceptual clarifications provided by Passeron (1990), the term life "course" will be used in the remainder of this paper. The analyses that follow fall within a "Durkheimian [theoretical] framework" since they refer to "the institutionalisation of social time; biographical intelligibility is subordinate to the description of the objective (cultural or statistical) structures that precede and determine it" (Passeron, 1990, p. 17). In other words, "the time of the social future of individuals and groups is, before all possibilities of tactical or strategic choice, already structured by norms, social definitions, representations or, more generally even, socially conditioned 'typical chances' of biographical development or orientation" (ibid., p. 18). These typical chances can be approximated by calculating "a posteriori probabilities". The adjective "biographical" (or "life") refers to the surveys of the same name which, particularly in demography, use questionnaires to collect information on the family, professional and residential dimensions of the lives of the respondents

family worker in agriculture" (group 1 with a maximum of two permanent employees) and their mother also belongs to group 1 or is an employee, a blue-collar worker or inactive. The hypothesis here is that, in these old working classes, it is primarily the man's occupation that determines the social status of the household, but that a higher status for the woman "moves" the household out of the blue-collar or peasant class in the strict sense.

Nearly a quarter of the population studied is from a blue-collar background, while 12% are from the peasant class and 15% from the upper classes, with just under half coming from other social groups (Table 1). The proportion of individuals of peasant origin has decreased over the generations – and with the collapse of the peasant population associated with the modernisation of agricultural production (Mendras, 1967) – the proportion of individuals from the upper classes has increased, primarily because of the expansion of education (Cacouault & Œuvrard, 2009), while the proportion of individuals from blue-collar backgrounds appears to have remained more stable.⁵

3. Analysis of Life Courses

One way of exploring the interconnections between the residential, matrimonial, professional and parental dimensions of life courses is to measure the degree of association between the different dimensions. First, a sequence analysis is performed: for each of the four dimensions, the dissimilarity between all pairs of sequences⁶ is measured using optimal matching and four distance matrices are obtained. The correlation between the distance matrices is then measured using the "RV coefficient". A typology of courses is then established using a hierarchical agglomerative clustering.

3.1. The Associations between the Dimensions

For both women and men, and regardless of their social background, two main associations stand out, between the residential and marital dimensions and between the marital and parental dimensions (Table 2). The process of decohabitation therefore seems to be primarily linked to the family sphere. This is particularly the case for women from blue-collar backgrounds and for men from blue-collar and peasant backgrounds. In the case of men, we find that the correlation between the residential and marital dimensions decreases in favour of the correlation between the residential and professional dimensions, with the former increasing from approximately 0.5 for the oldest generations to around 0.3 for those born from the 1960s onwards, while the latter, which stands at zero among the oldest generations, reaches 0.2 among the most recent generations (Figure I-A). In other words, the professional dimension is increasingly significant in the decohabitation process.

In addition, the professional dimension is generally poorly correlated with the other dimensions, highlighting the relative independence of the family and professional spheres. However, among women, the professional and parental dimensions are strongly associated, and the association becomes stronger over the generations

Generation		Tatal			
	Blue-collar	Peasant	Upper	Other	TOTAL
1932-1945	20.9	18.3	11.3	49.5	100
1946-1961	25.4	12.7	13.8	48.1	100
1962-1975	24.6	8.0	19.0	48.4	100
Total	24.1	12.2	15.1	48.5	100

Table 1 – Social background by generation (%)

Reading Note: 20.9% of individuals born between 1932 and 1945 are from blue-collar background.

Sources and coverage: Santé et itinéraire professionnel (Health and Professional Career) survey (DREES-Dares, 2006-2010), individuals living in an ordinary household in metropolitan France and born between 1932 and 1975. Author's calculations (weighted data).

^{5.} The category "other" includes a very broad range of social profiles. Given the high level of heterogeneity, a precise and relevant description would require breaking this category down into many groups, making further analysis confusing. A decision was therefore made to retain only the three groups corresponding to clearly identifiable social polarities, i.e. one "upper" (upper-class background) and two working or "lower" classes (blue-collar and peasant backgrounds).

^{6.} The substitution cost is constant and equal to 2 for each dimension. The insertion/deletion cost is set at 3/4 of the maximum substitution cost, i.e. 1.5, thus balancing the importance of timing, duration and event sequencing in the consideration given to time in the optimal matching algorithm (Robette & Bry, 2012). Calculations were performed using the R software and the TraMineR package (Gabadinho et al., 2011).

Condor	Dimensions of courses			Total		
Gender			Blue-collar	Peasant	Upper	iuldi
	Residential	Professional	0.026	0.002	0.090	0.034
	Residential	Marital	0.477	0.318	0.262	0.369
Maman	Residential	Parental	0.139	0.083	0.029	0.097
vvornen	Professional	Marital	0.023	0.009	0.048	0.037
	Professional	Parental	0.226	0.155	0.199	0.198
	Marital	Parental	0.251	0.312	0.250	0.272
	Residential	Professional	0.154	0.021	0.035	0.076
Men	Residential	Marital	0.457	0.460	0.271	0.391
	Residential	Parental	0.046	0.117	0.036	0.041
	Professional	Marital	0.127	0.003	0.098	0.097
	Professional	Parental	0.010	0.019	0.063	0.006
	Marital	Parental	0.256	0.378	0.283	0.280

Table 2 – Correlations between the dimensions of life courses by gender and social background

Notes: The correlations were calculated using the RV coefficient.

Reading Note: For women from a blue-collar background, the correlation between the residential and professional dimensions is 0.026.

Sources and coverage: Santé et itinéraire professionnel (Health and Professional Career) survey (DREES-Dares, 2006-2010), individuals living in an ordinary household in metropolitan France and born between 1932 and 1975.



Figure I - Change in the correlations between dimensions

(Figure I-B), with the correlation increasing steadily, from 0.1 to nearly 0.3 for cohorts born around 1970.

3.2. Multidimensional Scaling

To further investigate life courses, we turn to multiple sequence analysis (see Pollock, 2007 and Gauthier *et al.*, 2010). Here, optimal matching is performed based on all four dimensions jointly⁷, meaning that the association between the different dimensions is no longer the object of analysis, as it was previously, but is instead incorporated into the construction of the data and calculations. Optimal matching is performed separately for men and women.⁸ We thus obtain two distance matrices, which serve as the basis for most of the analyses that follow.

Multidimensional scaling techniques are then used to represent distance matrices in an Ndimensional space. For women, the first axis of this space is strongly correlated with the age at first independent home, the age at first birth, the age at second birth and the number of years spent in a couple (between 14 and 35 years), ordering women according to the timing of their transition from the family of orientation to the family of procreation.9 The second axis is strongly correlated with the amount of time spent in long-term employment, contrasting women who entered the labour market early with predominantly inactive women, with, in intermediate positions, women having remained in education for many years and having entered the labour market at a relatively late stage. For men, the first axis is, as it is for women, strongly correlated with age at first independent house, age at first birth and the number of years spent in a couple (between 14 and 35 years). The second axis, on the other hand, is somewhat different, pitting men having spent the most time in long-term employment against those who spent more years in education or in short-term employment.

Based on this initial analysis, entry into the marriage market and entry into the labour market appear to be relatively independent for both men and women, a finding consistent with the desynchronisation of the thresholds of the family and professional spheres highlighted by Galland (1995).

3.3. Typologies of Life Courses

By applying a hierarchical agglomerative clustering to the distance matrices¹⁰, we are able to identify the basic regularities in the corpus of life courses, i.e. not the "modal course" but a set of standard courses. The decision as to the number of clusters to include in the typology is governed by the heuristic potential of the results and a trade-off between parsimony and cluster homogeneity. Since men's courses tend to be less varied than women's (see above), the number of clusters needed to account for the forms taken by these courses (i.e. four) is lower than it is for women (six clusters).

For men, the first cluster includes 25% of the respondents, with the members of this cluster being distinguished by the fact that they access their first independent home, form a couple and have their first child relatively late and generally have two children at the age of 35. This standard course will be referred to subsequently as "2CHI-LATE". By contrast, in the second cluster ("2CHI-EAR", 28%), the transition from the family of orientation to the family of procreation occurs at a relatively early stage. Most men in this cluster also have two (or three) children by the age of 35. In the third cluster ("SINGL", 21%), men are mostly single and without children at the age of 35. Finally, in the fourth cluster ("1CHI-LATE", 26%), men access their first independent dwelling and form a couple later than in the second cluster but earlier than in the first cluster and, above all, become parents later than men in the other clusters and have only one child at the age of 35. As we can see, the professional sphere appears to play a limited role in the construction of the clusters: the key factors differentiating the life courses examined are the conditions of entry into the marriage market.

The space of life possibilities suggested by the typology does not present the same polarisations from one social class to another. In fact, the standard "2CHI-LATE" and (to a lesser extent) "SINGL" courses are over-represented among the sons of farmers, while the "2CHI-EAR" courses are over-represented among the sons of blue-collar workers and the "1CHI-LATE" and "SINGL" courses are over-represented among the sons of

^{7.} The same costs (substitution and indel) as in the previous analysis are retained.

^{8.} Because of the earlier stage at which transitional events among women take place and the significance of inactivity among women, it is more sensible to separate the analyses for each gender.

^{9.} While this first axis appears to be relatively independent of the professional sphere, we find that women who entered the marriage market the earliest appear to experience long episodes of inactivity. The black and white index plots are illegible and are therefore not shown here. The colour versions are available from the author on request.

^{10.} With Ward's clustering criterion and class consolidation using the PAM (Partition Around Medoids) algorithm.

upper-class parents (Table 3). First, these differences can be interpreted based on the link between the professional career and entry into the marriage market: the sons of blue-collar workers contrast with the sons of upper-class parents in terms of the timing of the transition from the family of orientation to the family of procreation since the latter, by spending more time in education, enter the labour market at a later stage and tend to postpone the stage of "accession to the attributes of [family] maturity". In other words, for them, youth operates as a moratorium (Chamboredon, 1985, p. 23). On the other hand, the tendency of farmers' sons to enter the marriage market at a late stage (or indeed not at all) is linked to their dominant position on this market (Courgeau & Lelièvre, 1986; Bourdieu, 2002).

The main difference in the typology of women's courses comes from the fact that inactivity (non-work) is a central feature of two clusters, "INACT-3CHI" and "INACT-2CHI" (of the order of 12% in both cases). The first of these clusters differs from the second in that decohabitation occurs earlier, the modal number of

children at age 35 is higher (3 compared to 2) and inactivity predominates throughout the professional trajectory, whereas periods of non-work are generally the result of a career break in the "INACT-2CHI" class. The profiles of the other four clusters are similar to those of the male typology: there is a cluster of singles without children ("SINGL", 13.9%), a cluster of women in couples with generally one child at 35 years of age and having had their child relatively late ("1CHI-LATE", 26.8%), and two clusters of women in couples with two children at the age of 35, one of which is characterised by a relatively early transition from the family of orientation to the family of procreation ("2CHI-EAR", 11.7%), while the other is characterised by a relatively late transition ("2CHI-LATE", 22.9%).

These standard courses are not evenly distributed according to social background. The "SINGL" and "CHI-LATE" clusters are clearly overrepresented among women from the upper classes (Table 4): for them, remaining in education for longer often means postponing the family transition. The courses of working women with

Standard course		Total		
	Blue-collar	Peasant	Upper	IOlai
SINGL	18.2	22.3	26.3	20.8
1CHI-LATE	23.4	19.1	29.0	25.9
2CHI-EAR	35.6	25.9	19.2	28.5
2CHI-LATE	22.8	32.8	26.3	24.8
Total	100	100	100	100

Reading Note: 18.2% of men from a blue-collar background have a standard "SINGL" course.

Sources and coverage: Santé et itinéraire professionnel (Health and Professional Career) survey (DREES-Dares, 2006-2010), men living in an ordinary household in metropolitan France and born between 1932 and 1975.

Standard source		Total		
Stanuaru course	Blue-collar	Peasant	Upper	TOLAI
SINGL	10.7	13.5	18.2	13.9
1CHI-LATE	21.4	24.6	40.2	26.8
2CHI-EAR	13.3	13.7	5.7	11.7
2CHI-LATE	25.6	24.9	18.4	22.9
INACT-2CHI	11.9	9.9	12.0	12.1
INACT-3CHI	17.1	13.5	5.5	12.7
Total	100	100	100	100

Table 4 – Standard life courses of women according to their social background (%)

Reading Note: 10.7% of women from a blue-collar background have a standard "SINGL" course.

Sources and coverage: Santé et itinéraire professionnel (Health and Professional Career) survey (DREES-Dares, 2006-2010), women living in an ordinary household in metropolitan France and born between 1932 and 1975.

two children ("CHI-EAR" and "CHI-LATE") are slightly over-represented among women from the working classes (both blue-collar and peasant). Finally, inactivity associated with high fertility ("INACT-3CHI") is clearly more common among the daughters of blue-collar workers, underlining the reproduction of the original family model, where decohabitation is associated with social autonomy achieved through marital union (Bloss *et al.*, 1990).

4. Changes

4.1. Changes in the Multidimensional Scaling Factors

By examining the evolution of men's coordinates in the space of factors (axes) obtained from multidimensional scaling (see above), we can first identify two periods for the transition from the family of orientation to the family of procreation (axis 1), with the transition occurring at an increasingly early stage from the early 1930s to the early 1940s, at which point the trend reverses, especially from the cohorts of the mid-1970s onwards (Figure II-A). These results are consistent with the timing of the baby boom (Daguet, 1996). The sons of peasants also stand out by virtue of their earlier and more pronounced family transition at the beginning of the period, through a catch-up effect, a trend that resumes in the mid-1960s. The professional transition (axis 2), meanwhile, is found to decline steadily throughout the period, regardless of social background (Figure II-B).

In the case of women, the evidence points to a later family transition among the cohorts of the late 1960s compared to those of the early 1940s, a trend also consistent with the end of the baby boom (Figure III-A). Among women, the case of the children of peasants also stands out insofar as their family transition is found to have occurred increasingly early until the cohorts born around 1940. The changes in women's positions on the professional axis comprises several periods (Figure III-B): the amount of time spent in long-term employment increases up to the cohorts of the late 1940s (probably because of the fall in inactivity among women), but decreases from those of the late 1950s onwards (probably as a result of prolonged education).



Figure II – Change in position according to the social background of men



Figure III - Change in position according to the social background of women

4.2. The Significance of Social Background

Here, analysis of variance methods are used, with the distance matrix between courses as a dependent "variable" and social background as an independent variable and with the analysis being repeated for each birth cohort. The proportion of variance explained measures the significance of background.

Among men, we see a "bump" at the beginning of the period, followed by a degree of stability between the generations of the mid-1940s and late 1960s, followed by an increase (Figure IV-A). Among women, the proportion of variance explained by social background decreases between the generations of the mid-1940s and the late 1960s before subsequently increasing (Figure IV-B). In other words, the significance of social background for the development of life courses appears to increase for women and men in the most recent cohorts, with the impact being slightly greater among men.

The analysis can be refined using, as a dependent variable, the coordinates on axes 1 (family dimension) and 2 (professional dimension) of the factor

analysis performed previously (multidimensional scaling). For both men and women, the change in the proportion of variance explained by social background takes a similar form for the family dimension and for the life courses as a whole, but with more marked fluctuations. In particular, the significance of social background for the family transition among women rose sharply at the end of the period, increasing more than fivefold over the cohorts of the early 1970s.

For men and the professional dimension, on the other hand, the trend is towards a sharp decline between the first cohorts and those born around 1960^{11} : the significance of social background decreased roughly threefold, from an explained variance of 30% to less than 10%, a trend linked to the expansion of education. The significance of background for the professional dimension is more stable – and on average lower – among women. Lastly, among women, the significance of background is greater for the family dimension than it is for the professional dimension, whatever the birth cohort, whereas it is greater

^{11.} Despite a rebound for cohorts born between the mid-1940s and the early 1950s.



Figure IV – Change in the significance of social background

for the professional dimension among men for most of the cohorts.

increases fourfold within a period of roughly ten years, rising from 6 per cent to about 24 per cent.

4.3. Gender Differences and the Significance of Gender

The same approach, but this time using sex as an independent variable, can be used to assess the significance of gender for the development of life courses. Gender plays a limited and increasingly small role from the oldest cohorts to those born around 1950 and appears to remain relatively constant thereafter (Figure V). The proportion of variance explained by gender for the family and professional dimensions shows more fluctuations, although the general trend is towards a degree of stability, at a relatively low level (less than 5% for most cohorts). In general, the significance of gender is highest among individuals from peasant backgrounds and lowest among those from the upper classes (Figure VI). In fact, this trend is apparent from the cohorts of the mid-1940s onwards, with gender becoming increasingly significant for children from peasant backgrounds from the cohorts of the mid-1960s onwards. The proportion of variance explained

4.4. Diversity of Life Courses

The degree of diversity of life courses will now be examined by calculating average distances¹² for different social groups. First, we see that the life courses of women are significantly more varied than those of men, regardless of social background (Table 5). The main explanation for this difference probably lies in the prevalence of inactivity in women's careers. Moreover, among both women and men, the most homogeneous courses are to be found among the children of upper-class parents, while the children of blue-collar workers present the most heterogeneous courses.

Over the long term, the degree of diversity decreases slightly among women (Figure VII-A), indicating that the trend is towards a

^{12.} The distances used are those calculated previously using optimal matching methods.



Figure V – Change in the significance of gender





Table 5 – Diversity of life courses

Social background	Gender		
	Women	Men	
Blue-collar	62.9	52.4	
Peasant	57.5	45.0	
Upper	53.1	43.8	
Total	65.3	55.2	

Reading Note: The average distance between the life courses of women from a blue-collar background is 62.9.

Sources and coverage: Santé et itinéraire professionnel (Health and Professional Career) survey (DREES-Dares, 2006-2010), individuals living in an ordinary household in metropolitan France and born between 1932 and 1975.

"standardisation" of courses. However, on closer inspection, standardisation applies to women of peasant origin, with the diversity of courses remaining relatively constant among the other categories. Among men, diversity is stable, although the observed stability is the result of the aggregation of contrasting trends according to social background (Figure VII-B). In fact, we see a sudden standardisation of courses among the sons of peasants starting with the cohorts of the mid-1960s, which may be an effect of the expansion of access to secondary education for these



Figure VII - Change in the diversity of courses according to social background

categories (Jégouzo & Brangeon, 1975; Œuvrard & Rondeau, 1985). The courses of the sons of blue-collar workers follow a pattern of standardisation from the oldest cohorts to those of the early 1940s followed by de-standardisation until the cohorts of the late 1950s, remaining relatively stable thereafter. Changes are found to be more chaotic among the sons of upper-class parents.

4.5. Complexity of Life Courses

The "turbulence" of courses is an indicator of their complexity (Elzinga & Liefbroer, 2007). In other words, it gives an idea of the "differentiation" of courses – i.e. the extent to which they tend to become increasingly complex, in the sense of a greater number of states experienced and heterogeneous durations of the various states.

Regardless of class of origin, differentiation among men increases slightly until the cohorts of the late 1960s (Figure VIII-A). The evidence points to a rapid re-adjustment of the complexity of the courses of peasants' sons born between the mid-30s and the mid-40s. Women's courses also differ, following a pattern similar to that of men (Figure VIII-B). Trends are similar regardless of the class of origin.

The differences in the complexity of courses between men and women are ultimately very limited, as they are when comparing different social origins, with a tendency towards a slight increase. The differentiation – i.e. the increasing complexity – of the courses of young French adults observed here confirms, over a longer period of time, the results of Elzinga & Liefborer $(2007)^{13}$, as well as one of the common hypotheses about the development of life courses (Shanahan, 2000). On the other hand, another hypothesis, that of the increasing diversity of courses -i.e.their de-standardisation - due to the "progress" of mobility and flexibility, and, ultimately, to the individualisation of courses, is not supported by the findings of this study.¹⁴ Over the long term, the life courses of young French people appear to

^{13.} As noted above, little empirically-based research has been conducted to test the hypotheses of the standardisation or differentiation of life courses. This is even more the case when a social background dimension is included. In other words, there are few points of comparison.

^{14.} Elzinga & Liefbroer (2007) found evidence of the diversification of courses, but focused on the family dimension and only considered women's courses.



Figure VIII - Change in the complexity of life courses according to social background

be relatively constant in terms of their diversity and are no more or less predictable or socially structured than they were in the past.

* *

The empirical analyses reported in this paper are based on the Santé et itinéraire professionnel survey, which provides information about the life courses between the ages of 14 and 35 of 5,066 women and 4,229 men born between 1932 and 1975 and living in an ordinary household in metropolitan France. Optimal matching (OM) methods were used, allowing simultaneously to circumvent the limitations of an approach based on transition thresholds (i.e. events) by considering the entire course as a unit of analysis, to take into account the interdependence of the different dimensions (residential, marital, parental and professional) of life courses, and to construct typologies rather than aggregate indicators, i.e. to restore a space of possibilities.

Among the key findings are that decohabitation is more associated with the family sphere than with the professional sphere and that the family and professional spheres have little correlation with one another. However, the link between the residential and marital dimensions was found to be much stronger among young people from blue-collar backgrounds. Among men, the link between the residential and marital dimensions was found to have decreased in favour of the residential-professional link, while the link between the professional and parental dimensions was found to be significant only for women, among whom it increases over the generations.

The impact of social background on life courses has increased since the late 1960s and is more pronounced in the family sphere among women and in the work sphere among men. Gender differences are on the decline, particularly among the pre-1950 generations, regardless of social background. Lastly, the results show no evidence of a clear trend towards a de-standardisation of life courses. However, the evidence suggests that they are becoming increasingly complex.

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