

Life course transitions and value orientations: Selection and adaptation

R. Lesthaeghe
Vrije Universiteit Brussel
rlestha@vub.ac.be

G. Moors
University of Tilburg
gmoors@kub.nl

1. Introduction

This paper contains four sections. To start, we shall give a brief overview of the place of value orientations in a number of social science paradigms. This will give us the opportunity to clarify our position from the start. Then, we shall proceed with a sketch of how and why various strands of sociology and demography came to give value orientations a more prominent place. Next, we shall focus on the recursive model in which (i) value orientations contribute at the micro-level to making choices and at the macro-level to altering social structure, and (ii) are themselves subject to adaptation given earlier choices or structural transformations. At the micro-level we shall illustrate this dual process of selection and adaptation with empirical findings from panel studies, i.e. the most appropriate research design for capturing the dynamics of recursive causation over time. At this point, specific attention will be paid to values as co-determinants - and even intergenerational ones - of life course choices with respect to patterns of household formation, and to such life course decisions as stimuli for either the consolidation of previously held values or for their reorientation. This recursive model will help us, in a last section, to detect the footprints of selection and adaptation in a dataset produced by repeated cross-sectional surveys. In this empirical section we shall document how not only specific attitudes focussing on family issues are related to the choices regarding household formation, but more importantly, how much broader ideational or "meaning giving" dimensions in the spheres of religion, ethics, politics and work are equally part and parcel of the same recursive process.

2. Beyond the structure-culture duality

Just as in the "nature-nurture" debate, culture and social structure or culture and economics have commonly been pitted against each other. Much of the debate stems from the competition between social science paradigms and the balkanization of social science disciplines. In general, three types of attitudes toward the explanatory role of values can be observed: *denial*, *trivialization* and *emphasis* (Moors, 1999).

The most radical type of denying the explanatory significance of values is to obliterate value orientations altogether. Not only the neo-classic economic approach based on the primacy of the rational calculus of advantage (e.g. Becker and Stigler, 1977), but also offshoots such as the transaction cost approach (e.g. Ben Porath, 1980; Polak, 1985) have no explicit use for ideational choices. Admittedly, economic theory recognizes tastes or preferences and needs, but the *structure* of preferences (if not treated as a random disturbance) or the specific *types* of needs (other than material ones or social capital) are still not central points of attention. In all fairness, however, several economists have recently begun to address more difficult questions, often in connection to attempts of measuring non-material needs. In considering the value of children, for instance, they bump into the psychological utility of children and into the "existential" meanings of parenthood. Children may have long ceased to be providers of services in household production in the industrialized world, and as a result of early peer group formation they are not providing lasting "social capital" to parents either. And why would Becker's "altruistic family head" incorporate the well-being of others in his own utility function? One can think of a number of gains accruing to him (her), but these can be in terms of a variety of basic ideational goals such as self-respect, security, esteem or social status, sense of accomplishment, inner harmony, true friendship and inclusion, power, excitement or pleasure. Hence, the economic concepts of "value", "gain" and "utility" all require the specification of needs to include those associated with what Rokeach (1973) called "the preferable end-states of existence". Moreover, as basic material needs (sustenance, security) are satisfied, new needs may emerge (e.g. Maslow, 1954) that are more and more articulated in terms of such existential needs. To sum up, if neo-classic economics and social transaction theory had little use for value orientations - in the psychological or sociological sense - in the past, they may have an increasing use for them in the future when addressing new topics for which "utility" is no longer to be understood in a material sense. "Culture" is then likely to regain a spot. Conversely, economic theory has always given a prime place to the choice of alternatives. Rokeach's "end-states of existence"

cannot be chosen all at the same time. In this respect, those who did give a place to ideational factors will have to move on much more to *micro-models of competing alternatives* rather than relying on analyses of values orientations side by side (cf. Barber, 1998).

Older forms of sociological theory are equally notorious for denying the significance of culture. These were predicated on either the neo-Marxist view that "it is not consciousness of men that determines their existence, but on the contrary, their social existence that determines their consciousness", or on the consideration that values can only be inferred from behaviour itself, and that the reference to such values is a mere sociological tautology. The former view has had a long tradition in history, and European history more specifically, but also several strands in sociology have continued along these lines. A segment of contemporary studies of ethnic minorities, for instance, see all such minorities as an "underclass" reproducing as an "underclass" (e.g. Castles & Kossack, 1973) and further "cultural" specifications of the processes of social exclusion or differential integration are considered to be of marginal utility only. The second view essentially offers a methodological critique pertaining to the observation and measurement of values, but then, the ethnomethodological school is highly critical of all measurement and not just to that of values alone.

Trivialization of values may equally manifest itself in a number of ways. Values may be trivialized by "explaining them away" or by considering them as "constants" or as "exogenous". Within rational choice theory such an exogenous character is fairly explicit: rationality is a *natural trait*, not a social construct. However, *maximization* of the importance of values may equally lead to trivialization. This can be illustrated in the works of T. Parsons who strongly protested against the "natural rationality" just mentioned. Part of the trivialization is then the teleological role of values in Parsonian functionalism: values determine behaviour *by definition*, and observable reality is forced into accord with a preconceived model (cf. Spates, 1983). Although values are being theoretically emphasized, empirically they are trivialized.

The empirical tradition of values research and associated trends evidently tends to emphasize the role of values in directing behaviour, without, however, of necessity subscribing to functionalist determinism. Conceptualization of values does remain a

difficult issue. Many researchers use the concept of values assuming an intuitive understanding of it (cf. Almond and Wilson, 1988), and the empirical tradition may have confused matters even more by its reference to a plethora of concepts such as norms, beliefs, needs, orientations, preferences, behavioral probabilities and so on (cf. Lautmann, 1971). But there are basically two strands of thought. The first goes back to Kluckhohn's definition (1951: 395) that "*a value is a conception... of the desirable which influences the selection from available modes, means and ends of action*". This is the more deterministic definition rooted in functionalist anthropology. The second tradition goes back to the social psychologist Rokeach (1968, 1973) who sees "*values as enduring beliefs that a specific mode of conduct is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence*" (1973: 5). The major advantage of Rokeach's view is that it avoids to make issues that are subject to empirical questioning - such as reference to action - an integral part of the definition. Kluckhohn emphasizes values as cultural *imperatives* in the creation of social cohesion; Rokeach considers values as a collection of *options* in a phenomenological world in which individuals have to give meaning to their action. Nevertheless, Rokeach has conceived of values as *enduring*, but he has repeatedly pointed out that this is not to be taken as complete stability. This is an issue open to empirical investigation (see further).

To avoid confusion, we shall basically stick to the principle of the "abstraction ladder". At the apex we see the more general and abstract concept of *value* or *value orientation* to which we give the ideational meaning in the way defined by Rokeach. Values are based on *beliefs* (or stronger: convictions) or choices relative to end-states such as: "all men are equal" (equality), "happiness is more important than wealth", or "God will ultimately judge our actions" (justice, salvation), etc. In Rokeach's list we also encounter comfort, mature love, appreciation of beauty, inner harmony (= freedom from inner conflict), self-esteem, sense of accomplishment, security, excitement, pleasure, social recognition, true friendship, peacefulness and wisdom (= mature understanding of life).

We shall use the term *attitude* one step down on the abstraction ladder, i.e. when considering *domain-specific opinions*. In this way we shall refer to political, ethical, social, religious, gender, family or work-related attitudes. Attitudes do not carry sanctions. *Norms*, on the other hand, are *situation-specific rules of conduct* that prescribe or prohibit, and therefore can be followed by sanctions if violated. Norms can be more universal or

more particular for given social settings, and the areas of application can expand or contract. Internalization of norms may contribute to the definition of value orientations.

The values argument is a part of a broader discussion of the role of culture in social demography (cf. Hammel, 1990). It is obviously not feasible to neglect the importance of structural types of explanations. For instance, the relevance and explanatory power of the neo-classic economic theory, of transaction cost or exchange theory or of Easterlin's economic deprivation theory cannot be ignored (cf. Lesthaeghe, 1998). Pollak and Watkins (1993) argued that cultural and economic approaches are compatible either when they are consistent or equivalent to each other, or when cultural explanations attempt to specify the scope of economic rational choice explanations. We have gone much further than that: they are equally compatible if they complement each other, i.e. when mechanisms specified in one partial theory activates, or is activated by, mechanisms considered in the other partial theory. The rules of logic, as for instance proposed by Lakatos (1970, 1978), can then be a major help in the formulation of more comprehensive theories in which *recursive relations* and *complementarity* are fully developed (Lesthaeghe, 1998). In other words, the structure-culture duality is an artificial juxtaposition of the past.

3. The ideational factor: empirical research questions and traditions

In this section we shall briefly consider a number of research areas in which the ideational factor has gained a more prominent place. The following areas will be discussed:

- (i) cultural change as a non-redundant factor in historical "modernization" processes;
- (ii) the role of values in socialization, and in the intergenerational transmission of value orientations;
- (iii) the dynamics of age, period and cohort effects, and the issue of durability of values;
- (iv) values and the unfolding of the life course.

3.1. Evidence from quantitative studies of "modernization" processes

History and sociology both have had a long struggle with the specification of the respective roles of structure and culture in the evolution toward the modern world. In history, both the neo-Marxist view and the softer versions stressing socio-economic and technological

factors have long dominated the scene. Among others, the French "Annales"-school and the history of scientific discovery have, however, slowly chipped off pieces of this pedestal by showing the influence of ideology, both religious and secular. At present, more balanced and especially more holistic views have gained ground. Sociology has had a long Weberian tradition of focusing on the roles of various ideologies of social order and their respective underpinnings in the creation of modern institutions, but in subfields dealing with the transformation of western and particularly non-western societies after World War II, structural explanations were often considered as sufficient. These commonly looked at factors such as changing modes of production, social stratification and the growth of education, urbanization, centre-periphery relations and economic globalization.

The subfield of social demography did not escape from these debates. Structural and cultural narratives of changing fertility and household composition lived side by side (for an extensive discussion see for instance Kirk, 1996, and van de Kaa, 1996). Social demography became a prime testing ground. Studies in historical demography, for instance, and particularly those that were able to measure cultural proxies (such as indicators of secularization) could come closer to statistically establishing the respective roles of structural modernization and of cultural transformations. European heterogeneity in all these respects provided the laboratory (e.g. Livi Bacci 1971, 1977; Lesthaeghe and Wilson, 1986; Lesthaeghe, 1977; Galloway et al., 1994). The use of ecological correlations and problems with collinear predictors were then tough nuts to crack, and these issues could not be adequately resolved via micro-level studies of demographic change either. These simply lacked appropriate covariates at the individual level. Nevertheless, the studies of regional aggregates indicated that, whenever appropriate proxies could be found, cultural change was not a redundant factor. This led to A.J. Coale's conceptualization (1973) of the three preconditions that need to met *jointly* for the success of a fertility transition. These are:

- (i) *readiness*, or the favourable outcome in the evaluation of advantages and disadvantages;
- (ii) *willingness*, or the ethical and religious acceptability leading to the gradual legitimation of alternative behavioural patterns;
- (iii) *ability* or the availability and discovery of the "technical" means toward the new end.

This "ready, willing and able" conceptualization (RWA for short) not only lends itself to drawing direct attention to the roles of economic and cultural factors within a more holistic framework, but equally to the detection of bottleneck conditions during the process of change (Lesthaeghe and Vanderhoeft, 1997) and to the study of patterns of diffusion. Furthermore, Coale's three preconditions - which themselves can be written in the form of a Boolean expression, i.e. $S = R3W3A$ (with S for "success" or "outcome present") - draws attention to viewing the determinants of change as conditions that may be either *sufficient*, *necessary* or *non-redundant*. Such a Boolean view has also opened avenues for empirical verifications complementing classic regression analyses (for an application to the French fertility transition, see Lesthaeghe, 1992).

Another avenue for linking values to modernization processes has been followed in studies of cultural change in developing countries or in newly industrializing ones. In these studies value orientations could be measured at the individual level, but unfortunately their prediction has not been assessed for lack of an appropriate panel design. The classics in this field are the Inkeles and Smith (1974) comparative study of "individual modernity" in six countries (Bangladesh, Nigeria, India, Argentina, Chile and Israel) and the Bulatao (1979) comparative study on the value of children (Indonesia, Philippines, South Korea, Taiwan, Singapore, Thailand, Turkey, USA and West Germany). Extensive use of attitudinal batteries was made in these socio-psychological studies to quantify an equally impressive list of values orientations. Inkeles and Smith's conclusions (1974: 313) are worth quoting since they have not lost any of their significance thirty years later:

"Beyond politics, the modern man showed himself to perform differently from the more traditional man in many realms of action having practical bearing on the process of societal modernization. The more modern man is quicker to adopt technological innovation, and more ready to adopt birth control measures; he urges his son to go as far as he can in school, and he permits his wife and daughter to leave the home for more active participation in economic life. In these and a host of other ways..... the man who is modern in attitude and value acts to support modern institutions and to facilitate the general modernization of society".

But equally significant in the balanced approach of these authors was their refusal to consider such socio-psychological mechanisms in isolation of structural effects (313):

"In saying this we are not exposing some form of naive psychological determinism. We are not unaware that a modern psychology cannot alone make a nation modern".

Hence, also in the Inkeles-Smith conceptualization is the reorientation of values a non-redundant and even necessary condition, but by no means a sufficient one.

On the whole, the early studies of values orientations and their link to the adoption of new patterns of behaviour paved the way for more holistic understanding of complex processes. However, they could not yet capture the more precise nature of mechanisms and had to do with general correlations. Nevertheless, virtually all such "modernization" studies forecasted - and as it turns out quite correctly so - the rise of individualism and the retreat from tradition and authority vested in it.

3.2. The role of values in socialization and the patterning of life course trajectories

A completely different line of investigation has been followed in studies among a western public concerned with the role of values in socialization and the intergenerational transmission of values. The more advanced of these studies quickly realized that panel designs were necessary to get beyond mere statistical associations. Furthermore, several studies belonging to this category also have much broader implications, and are illustrative of ideational shifts in general.

The intergenerational transmission of values is commonly considered - both in historical and contemporary social theory - as the linchpin for the reproduction of social order. Social class differences with respect to socialization values can be traced back to at least the 16th Century in Europe, and are highly persistent over time, as several historical studies of childhood have eloquently documented (e.g. Ariès, 1962; Stone, 1977; Vinovkis, 1987). Such values shifted essentially away from stressing *conformity* and toward the accentuation of *self-directedness or autonomy*. This shift even became the pedestal of modern development psychology (see Piaget, 1932). Obviously both the trend and the cross-sectional social class differentials are compatible with the dramatic decline in childrens' economic utility and with the evolution toward the "economically useless, but emotionally priceless child" (Zelizer, 1985). But this shift runs equally parallel to an equally long term ideational evolution accompanying the demise of religious and secular institutional controls based on sin, fear, culpabilisation and punishment (cf. Delumeau, 1983). Hence, there are many historical strands that lead to the rise of autonomy, and all of these have roots that developed long before the industrial revolution of the 19th and the educational revolution of the 20th Century.

The statistical and survey-based study of socialization values really takes off with the Middletown Study of Robert and Helen Lynd (1929). They developed a battery of a dozen traits or "qualities to be stressed in educating sons/daughters" that are still used today in the European and World Values Studies. The Lynds documented that the old familial stress of conformity was gradually eroded by the new responsibilities (requiring autonomy) accentuated in schools. Moreover such school influences were equally instrumental in spreading the awareness about the developmental traits in children to all social strata of the community. Schools were both resocializing parents and eroding class differentials. Nevertheless, the replication of the Lynds's battery in NORC national surveys from the 1960s through the 1980s (cf. Kohn, 1977) and in Detroit over a similar time span (cf. Alwin, 1989, 1990) indicated that social class differences in stressing conformity versus autonomy had persisted, but equally that the steady trend toward autonomy also accelerated with the accentuation of individual freedom from all institutional patronage and controls since the 1960s. Evidently, such findings invited a closer scrutiny for period, age and cohort effects, and in this respect, the literature on socialization values ties up with that concerning "political cohorts" (cf. Alwin, 1992), which we shall review shortly. But before doing so, attention should also be drawn to the findings of more sophisticated panel studies.

The panel design is not only useful for the coherent measurement of trends, but absolutely essential for decomposing overall associations into *selection effects* and subsequent *recursive effects of reinforcements or adaptations*. Most analyses of panel data focus on the former. In the field of household formation, panels have been used to establish strong selection effects operating via both structural and ideational factors. These include:

- Effects of parental household structure, parental marital problems, and parental socio-economic status or ethnicity on ages and forms of home leaving of children. One of the first series of analyses in this vein stemmed from the *Panel Study of Income Dynamics* (PSID) indicating for the US that disadvantaged parental antecedents lead to earlier home leaving, more cohabitation, greater risks of teenage pregnancy and single motherhood (cf. McLanahan, 1985; Michael and Tuma, 1985; Sandefur and McLanahan, 1990). These findings have been corroborated many times and, of course, for other societies as well (cf. Kiernan, 1992; Liefbroer, 1991; Gecas and Seff, 1990; Cherlin et al., 1995; Wu and Martinson, 1991).

- Effects of parental household structure and socio-economic characteristics on childrens' socialization variables, including their attitude formation as well as their educational performance and achievements. In these respects, other panels and particularly American ones have been instrumental in documenting such selection effects. The *National Longitudinal Study of the High School Class of 1972* and the *National Longitudinal Surveys of Young Men and Young Women* have provided a series of analyses of selection effects concerning attitudes, expectations and actual behaviour in home leaving patterns (e.g. Kobrin-Goldscheider and DaVanzo, 1986; Waite et al., 1986; Kobrin-Goldscheider and Waite, 1987; Goldscheider and Goldscheider, 1989, 1993). Even more appropriate for the study of intergenerational effects is the *Detroit Panel of Parents and Children*, in which not only the women who gave birth in July 1961 were followed through numerous waves, but also their children who reached young adulthood in 1980. With the Detroit panel it could be shown that the socio-economic characteristics measured early in the parents' own lives had more important effects than their later socio-economic changes on the subsequent cognitive development and school results of their children (Alwin and Thornton, 1984). Moreover, there was a steady influence of more traditional parental values, and particularly of church attendance, on the subsequent values of children, and later on, on the actual reduction of childrens' earlier home leaving, premarital sex and cohabitation (e.g. Thornton and Camburn, 1987, 1989; Thornton, 1991, 1992; Weinstein and Thornton, 1989; Thornton, Axinn and Hill, 1992). Clearly, parental values are predictive of childrens' values and both of these on actual childrens' behaviour. Findings such as these dispel the critique that ideational factors are merely tautological. More recent analyses with the Detroit panel furthermore indicate that more dimensions are involved in determining outcomes such as the timing and the household context of parenthood (Barber, 1998, 1999). These dimensions concern attitudes toward school, work and consumer-spending, and outline the career and material elements involved in the development of alternative life-styles (see also Crimmins et al., 1991; Easterlin and Crimmins, 1991; Marini, 1990). Such life-styles are *competing alternatives*, and attitudes with respect to them are again predictive of outcomes. Furthermore, subjects are *ex ante* aware of *role choices and role conflicts* that their subsequent options may cause. Earlier values orientations are hence predictive for choices with respect to alternative paths in household formation in contexts with plural models of life course structuring and high degrees of individual autonomy. Finally, the analysis of the

German *Bielefeld Panel* shows that there is a direct predictive link from individual autonomy and different views on gender relations to subsequent behaviour in household formation and fertility (Moors, 1996, 1997). The life style options, as expressed in career and material aspects, prove to be grounded more deeply in ideational views concerning Rokeach's "end states" and in the self-image of individuals concerning their place in any social context. This helps to explain why a series of more political attitudes (e.g. related to political party preference, "post-materialism", tolerance, protest-proneness, trust in institutions, community involvement, etc.) are equally involved in such selection and adaptation processes connected to demographic outcomes (e.g. Lesthaeghe and Meekers, 1986; Lesthaeghe and Surkyn, 1988; Lesthaeghe and Moors, 1994). Finally, not only dependent variables in the more narrow spheres of primary relations, typically studied by demographers, are at stake, but this holds more broadly for all aspects connected to social cohesion as well.

Most of the panel studies reviewed so far have been concerned mainly with the predictive power over time of value orientations for later selection of different life course paths. The issue of values adaptation (either reenforcement or negation), i.e. the reverse causal effect, has not been documented as frequently. Yet, the few empirical examples of this type of reverse causation are equally telling. The US "National Longitudinal Surveys of Young Men and Young Women" not only indicated that individualistic value orientations among young adults increased the probability of spells of living away from the parental home, but equally that such spells substantially reenforced attitudes and expectations that moved them further away from a traditional family orientation (Waite, Kobrin-Goldscheider and Witsberger, 1986). Moreover, such spells fostered less traditional views on gender roles and greater tolerance for non-conventional forms of behaviour. The authors attributed this affirmation-effect not only to the reduction of parental control, but equally to the learning experiences associated with single living. These experiences pertain in turn to the spheres of domestic skills and responsibilities. (housekeeping, financial management, self-control) and to more general social spheres (new peer groups). As Marini (1984) had indicated, values and norms are predictive of later behaviour, but they too change as behaviour changes.

Another striking example of values reenforcement is provided by the Detroit panel, and deals with the connection between religious participation of young adults and their

attitudes toward and subsequent behavior in premarital sexuality (Thornton and Camburn, 1989). Religious participation, rather than denomination, was indeed predictive of more restricted premarital sex, but such sexual behaviour caused a substantial reduction in religious involvement. This furthermore suggests that there is a *recursive spiral* in which secularism fosters non-traditional living arrangements and such life choices fuel further secularization (Thornton, 1985).

An example of "values negation" following life course decisions is provided by the Bielefeld panel (Moors, 1998): women moving out of cohabitation and into marriage readjust their views on economic autonomy and personal freedom of choice, whereas those who stayed in a consensual union reenforced these attitudes. Similarly, intervening marriage and parenthood produced a return to classic family values, whereas continued cohabitation pushed women further in the opposite direction.

The recursive process is, however, likely to be considerably more complex than measurements in panel studies with "discrete waves" indicate. Most probably, persons already readjust their values orientations in *anticipation* of certain critical life course choices, and this is also likely to occur in tandem with alterations in peer group structure. Then, new "circles of opinion" are selected that are more supportive of the direction of the new choice. In this fashion, the recursive model is just a crude statistical reflection of a much more intricate psychological and social process of *anticipatory (re)socialization*. Finally, this process is likely to be prolonged after the choice or action has taken place, and it then takes the form of *ex post rationalization*.

3.3. The dynamics of age, period and cohort effects, and the issue of values stability

Other parts of sociology and particularly political science have not so much been preoccupied with the dynamics of selection and adaptation at the micro-level, but rather with the stability or durability of value orientations throughout the entire life span, with the differentiation according to generation, and with the impact of time-specific political or economic events. These three features, commonly known as age-period-cohort (APC) effects, are of direct relevance for the understanding of the more precise dynamics of change at the societal level. As one extreme outcome we find Karl Mannheim's model (1928) of distinct generational units, shaped by common experience during their

"formative years" and characterized by high values and preference stability over the life course (the so called "political generations" as opposed to mere demographic birth cohorts, cf. Klecka, 1971). In this model, overall societal change in orientations is the outcome of the mere succession of generations: old values die off together with the older cohorts and new values are being brought in by newcomers in a process of "social metabolism" (Ryder, 1965). Apparently Auguste Comte was already well aware of this as early as 1839 when he wrote: "our social progression rests upon death" (quoted in Firebaugh, 1997: 30). At the other extreme, stability in values or opinions at the overall aggregate level can be generated if each successive generation merely adapts its views as it moves through the life course in such a way that it merely follows in the footsteps of its immediate predecessors. All sorts of more complex outcomes are of course possible. For instance, the degree of overall change can be carried by both the arrival of new generations and by individual drift *within* cohorts operating either in the same or in the opposite direction. From repeated surveys in the US between 1972 and 1988 it appeared that gender role attitudes were changing faster for the adult population as a whole than they were for the surviving adults (Firebaugh, 1997). Evidently, population turnover and individual change operated in the same direction, and for three out of four gender role items considered by Firebaugh (1997: 34) it turned out that close to half of the overall change over 16 years was due to cohort succession and about half to within-cohort individual shifts. Only on the item that "women are emotionally just as suited for political office as men" was the part played by within-cohort change much smaller.

The application of APC-models to repeated cross-sections, however, runs into considerable problems. First, such models should not be applied to instances in which the successive surveys are too widely spaced or when there are too few measurements in time. In the empirical section of this chapter we shall refrain from an APC-application simply because the European Values Studies are spaced with 10 years intervals and because there are only three rounds. Second, if APC is reduced to purely "chronological" specifications, i.e. when "age" is chronological age and when "period" is just the year of measurement, then "cohort" as the year of birth is simply $P-A$. As a consequence of this identity, a factoring of an overall change in three such separate effects is of course impossible. Either one of the three has to be dropped, or the mere chronological specification of the variables has to be altered.

In the first instance, Firebaugh's reformulation (1997: 31-32), with a factoring into orthogonal *within-cohort* and *cross-cohort* effects still allows for a clear partitioning of overall change into the share of cohort succession and of individual within-cohort drift. This approach has been used by Alwin (1991) for a number of American political indicators (party preference, party attachment and liberal-conservative self-rating), to opinions about conflicting female gender roles (family versus work attachment), and to attitudes concerning public expenditure on welfare and minority programmes. From 1970 to 1988, it turned out that the cohort replacement contribution was systematically toward the more liberal direction, but there were equally significant patterns of within-cohort individual change. For instance, younger cohorts were less attached to a political party than older generations, but attachment grew within each cohort over time. Similarly, younger cohorts were less prone to endorse welfare spending, but in each cohort the shift was toward greater approval of such expenditure. Only in the instance of women's roles were the within- and between cohort changes in the same direction, i.e. away from traditional roles. As in the example analyzed by Firebaugh (see above), the cohort replacement effect over almost 20 years came close to explaining half of the overall shift (Alwin, 1991).

The data from the Dutch Cultural Planbureau (van Ryssel, 1989), based on repeated cross-sections from 1970 through 1985, showed that the two dimensions of a "left-right" continuum exhibit highly contrasting profiles. Cultural indicators pertaining to autonomy, equality of sexes and tolerance (non-authoritarian education, gender equality, freedom of opinion, pro third world assistance, tolerance for sexual minorities) are nicely layered and differentiated by cohort, in much the same way as Inglehart's post-materialism index for the original six EU-countries (Inglehart 1970, 1985, 1990). This is also consistent with the findings of Firebaugh and Alwin for the female emancipation items in the US. Hence, there seems to be a cluster of value dimensions, typically associated with expressive individualism and Maslow's "higher order" or existential needs, for which generational succession significantly contributed to overall aggregate shift. We, furthermore, expect that also secularization and the expressive aspects of work satisfaction (cf. Kohn, 1997) follow a similar pattern. The economic aspects in the Dutch data set (equality in income and property, state intervention in income redistribution and in the economy in general, support for the democratization of higher education, and labour union militancy), by contrast, showed no such cohort differentiation, but strong within-cohort drift in all cohorts

toward the economic-political right from 1970 to 1985. Moreover, this within-cohort drift is evenly progressing in each of the five year intervals, and of the same magnitude for younger, middle and older cohorts as well.

The outcome from repeated cross-sections and from decompositions into the two dimensions, i.e. within- and cross-cohort shift, seems to be that especially the aspects of the "cultural revolution" in the west (secularism, expressive individualism, autonomy and reaction to institutional authority, gender equality, tolerance toward minorities...) developed more along the cohort model, at least until the early 1990s. Social metabolism and generational succession therefore accounts for a non-negligible part of overall aggregate change in these domains. But, at the same token, this is not valid for other aspects for which within-cohort drift is far more important. Attitudes toward state intervention in European welfare states and aiming at economic egalitarianism may belong to the latter category, as the Dutch data have shown.

The examples used so far show that the Firebaugh solution to the APC-conundrum still yields highly useful information. The other solution for the APC-identity problem consists of using other than chronological variables. This has the great advantage of specifying, right from the start, which precise aspects of history are being considered when referring to the concepts of age, period and generation. Chronological birth cohorts can then be transformed into generations that had similar experiences in their formative years, such as growing up in periods of economic depression, war or unemployment versus those growing up in periods with expanding consumerism. Similar specifications via such "direct measurements", such as Easterlin's relative cohort size or via cohort educational expansion, could be attempted. Chronological age can be transformed into categorical variables that capture trajectories through types of household positions or work experience. The years of measurement too could be typified through political or economic markers (political disturbance years, inflation or unemployment rates). Dependent on theory, such forms of "direct measurement" of any of the three APC-components could vary according to the phenomena that are to be explained. However, direct measurements that are highly collinear will not be of much use and equally result in biased estimates of effects. Also, one can only capture a more limited number of aspects that are subsumed in the respective age, period and cohort "bundles". Finally, sample sizes need to be quite large in each of the survey rounds.

On the core issues, there is also evidence from the panel studies. The hypothesis of individual values stability over time and throughout much of adult life was the first to be tested empirically. One of the earliest studies goes back to Newcomb's (1943) analysis of political opinions of young women in an American college (Bennington college). Most of the girls came from wealthy and conservative backgrounds, and Newcomb documented that their attitudes were quite malleable and shifted toward support for Roosevelt's New Deal. In 1961, i.e. 25 years later, Newcomb and colleagues (1967) reinterviewed the former students and found a remarkable consistency of political convictions with the earlier attitudes. Moreover, those with the high consistency had also chosen husbands with similar convictions. In 1984, Alwin and colleagues (1992) managed to contact 335 survivors of the original participants, and found that the political attitudes had persisted well into old age. Very similar results emerged from the National Election Study panel (NES) on party preference and intensity of support (Alwin et al., 1992), with the exception, however, that the intensity of support declined after age 60. This corroborated Sears's (1981) earlier speculation that, after a period of stability in values, there could be a phase of greater vulnerability to attitude change in later adulthood.

Also Rokeach's battery of "ultimate end states" was tested for stability in a two-wave panel over 7 years. The correlations over time for individual rankings of 18 items showed substantial variation. The strongest correlation (.68) was found for the item "salvation": either one cared or failed to care about this religious "end state" to start with, and few would alter their views. Much weaker stability (correlations below .30) was found for the items "freedom", "true friendship", "a world at peace", "wisdom" and – more surprisingly – for "sense of accomplishment". Despite the fact that, in the aggregate, the overall rankings of the 18 items vary very little from 1968 to 1981, there still seemed to be quite a bit of individual flux (see also Converse, 1964; Inglehart, 1985).

The outcome on the issue of individual stability seems to be that the results may vary strongly depending on the more precise nature of the value orientation at stake, and we suspect, also depending on the item and its wording. On the other hand, if individual flux is fairly random, individual shifts may mutually compensate without producing significant changes in aggregates such as cohorts or social classes. Both the Rokeach items panel study and the persistent cohort layering of dimensions related to Maslow's higher order

needs suggest that such aggregate stability may indeed result in many instances, but cannot be taken for granted.

3.4. Values and the unfolding of the life course: basic effects

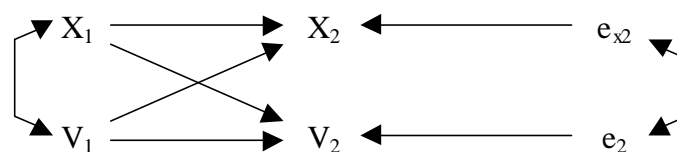
As indicated, any *dynamic* analysis of the role of value orientations in the unfolding of the life course requires the use of panel data with measurements of all covariates at the various waves, or at least two. But in itself, classic panels are not enough. Since one is interested in events or choices, both as a consequence of selection based on antecedent covariates, and as presumed causes of subsequent change in covariates, it is essential that such events are explicitly included and hence measured. This is normally done via retrospective questions included in the second wave, probing for the occurrence and proper dating of such relevant events. The diagram below illustrates the basic ingredients that are needed. We use X-variables for any "structural" covariates (such as socio-economic or other position variables) and V for any value orientation (or items). The numerical subscripts obviously identify the wave, and the subscript i indicates that we may have sets of X and V-variables.

Wave 1	Intermediate event/choice	Wave 2
X_{i1}	E	X_{i2}
V_{i1}		V_{i2}

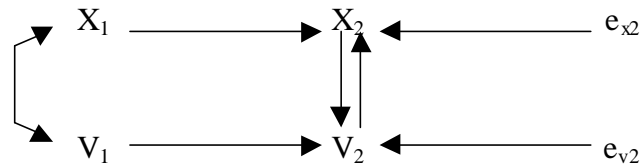
The event or choice E can be dichotomous (0,1) or polytomous (competing risks).

Classic panel analysis has no such intermediate events E, and typically proceeds with (i) the model of *cross-lagged effects* or (ii) the model of *synchronized effects* (cf. Finkel, 1995: 4-16). The path diagrams are respectively

(i) cross-lagged effects:



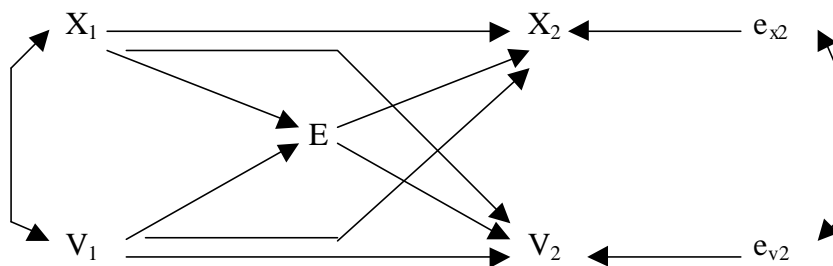
(ii) synchronous effects:



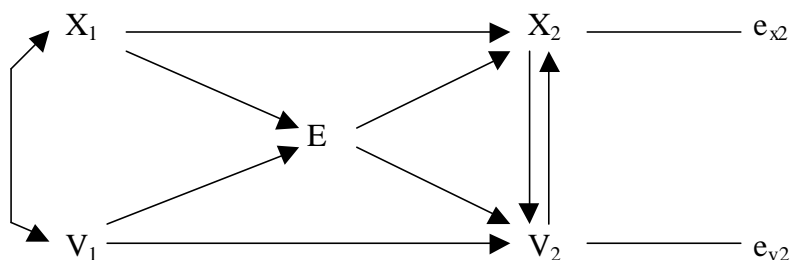
The two models are quite distinct. The cross-lagged model is simple to estimate with OLS, which has contributed to its popularity, but the cross-lagged effects are likely to be weak if the panel waves are relatively far apart in time. The synchronous effects model is more plausible if the reactions between X_2 and V_2 are more instantaneous, but obviously the estimation procedure is more complex (instrumental variables needed, 2SLS). The reward, however, is that the disturbance terms e_{x_2} and e_{v_2} are by definition uncorrelated.

The problem at hand is, in its simplest form, the two wave-intermediate variable model. The causal diagram is just an extension of the former two:

(i) cross-lagged:



(ii) synchronous:



In the first diagram, E is explicitly considered as one of the intermediate variables that produce the cross-lagged effects. If it furthermore turns out that the direct paths from X_1 to V_2 and from V_1 to X_2 have a zero-effect, E would be the main cause of the cross-lagged

influence. In the bottom model, E produces a cross-lagged effect, but room is also left for more synchronous influences between X_2 and V_2 . Again, the purely cross-lagged model is easiest to estimate, but the disturbance terms are likely to be correlated. However, this disturbance term correlation, when compared to $r_{x_1v_1}$, will give an indication of the relative amount of the relationship between X_1 and V_1 that is accounted for by the stability and the cross-lagged effects specified in the model. If this is not very substantial, this could mean that the cross-lagged influences are undervalued and that effects are more synchronous in reality. A typical model with synchronous effects, estimated via LISREL, is to be found in the classic application by Thornton and Camburn (1989), in which they established the recursive nature of the relationship between religious service attendance and premarital sex.

The structural equations for the cross-lagged model with E are simply:

$$\text{a) selection: } E = b_0 + b_1X_1 + b_2V_1 + e_E \quad (\text{eqn. 1})$$

$$\text{b) adjustment: } V_2 = b_3 + b_4X_1 + b_5V_1 + b_6E + e_{v2} \quad (\text{eqn. 2})$$

$$X_2 = b_7 + b_8X_1 + b_9V_1 + b_{10}E + e_{x2} \quad (\text{eqn.3})$$

The coefficients in this model can be estimated via three classic regressions, if E is dichotomous (0, 1) and not too skewed. Standardized coefficients (Betas) would then give a good first idea of the relative importance of the effects. However, in real life, researchers may wish to use a whole set of X and V-variables to study the selection effects of eqn. 1. Since E is virtually always a dichotomy or a polytomy, logistic regression is often used to estimate the parameters. Logistic regression is, however, cumbersome if one wants to estimate the whole model at once and not just the selection equation. This has often lead researchers to splitting up the more holistic model and lose sight of the fact that structural equations are needed. Also in looking at the adjustment equations 2 and 3 above, V_2 and X_2 are often continuous variables (e.g. z-scores), and then classic regression is chosen. In this way, the choice of different methods leads further to a loss of overview. This is not serious if one is solely interested in one part of the model, but quite unelegant if one wishes to capture the whole dynamics and overall outcome of selection and adaptation. Structural equation models, as available in LISREL, IEM, or variants, are therefore more suitable, particularly since these softwares also allow for building in special features such as latent variables in tandem with their indicators, and if need be, also for the incorporation of synchronous effects.

4. The footprints of life cycle selection and adaptation: values dimensions of young Belgian adults, 1981-1999

The traces of life cycle selection and subsequent adaptation are evident from the Belgian segment of the European Values Studies (EVS) conducted in 1981, 1990 and 1999. As indicated earlier, such repeated cross-sections do not permit the separation of the values-based selection effects on subsequent events from the later values adjustments (affirmation or negation) in function of particular life cycle transitions. However, classic multivariate analyses of values and covariates, such as age, household position or socio-economic status, performed with data from cross-sections do capture the *overall* associations, and these are the footprints of the real recursive mechanism. For instance, if the transition from living with parents to either living alone or to cohabitation is predicted by lower religiosity, and if the transition to a less conventional household position further strengthens secularism, then the two cumulative effects should lead to a negative association between such living arrangements and religiosity in any cross-section. The opposite obviously holds for two positive effects, e.g. moving directly to marriage being predicated on high religiosity and marriage itself leading to less secularism. The footprints become more blurred when the selection and adaptation effects operate in different directions, and cross-sections should then indicate a weaker association between any values dimension and the covariates.

Data from repeated cross-sections, such as the ones used in this example, not only permit the detection of the footprints of the actual two-way causal mechanism for a wide variety of values dimensions, but they also allow for a double screening:

- (i) the strength of the overall association may indicate which values dimensions are more strongly involved in the selection-adaptation process than others, and
- (ii) the interaction between the covariates (typically measuring current positions) and the year of survey may point in the direction of either the stability of the two-way causal mechanism or in the direction of changes. For instance, it could well be that the values orientations that were strong predictors of premarital cohabitation thirty years ago have lost some or much of their predictive power today, when cohabitation is considerably more widespread and acceptable.

Hence, repeated cross-sections have the drawback of only detecting overall associations, but they can capture changes over time in the patterning by covariate.

To illustrate this, we shall make use of the data from the Belgian Values Studies of 1981, 1990 and 1999 for the subgroup of young adults aged 20-29 at the time of the survey. This is the age group in which most life cycle transitions occur in tandem with the formation and consolidation of value orientations. In a first set of analyses we shall perform a multiple classification analysis (MCA) on selected items pertaining to the meaning of children, intergenerational duties and attitudes toward marriage. The MCA results for each covariate are produced in the form of percentage points deviations from the overall mean after controls for all other covariates in the model. In a second set we shall also analyse religious, ethical and political orientations. These are based on multiple indicators and scales constructed after an exploratory factor analysis. In this set the MCA-results are expressed in standard deviations. The covariates remain identical. Also note that we do not intend to give a direct causal interpretation to the MCA-results in the sense that the covariates are pure causal antecedents of the values orientations. Rather, the MCA outcomes simply indicate the *over- or underrepresentation of a given attitude according to the various categories of the position variables and after controls for all other covariates*.

The covariates are:

- *age* in years (20-29), and *age squared* in order to allow for some curvilinearity. These are continuous variables used as controls.
- *household position* with 6 classes: living with parents, living alone, cohabiting without children, not-married with children (i.e. mainly cohabitants and to a lesser extent also lone mothers), married couples with and without children.
- *sex*
- *current employment* with the non-active composed of students, housewives (or housemen) and the unemployed.
- *profession* referring to the current or last profession (for the unemployed or formerly employed), and with a residual category for students and the never-employed.
- *age at the end of education* in three groups, respectively till 16 (incomplete secondary), 17-18 (secondary), 19+ (beyond secondary education) and including current students (aged 20+).

- *year of observation*, being the survey years 1981, 1990 and 1999. This also indicates that we shall analyse the pooled data set for these three years together.

The seven items to be analyzed in the first set are:

- * the statement that a woman needs children for her life fulfilment (=1) versus all other responses, including "don't know" (=0);
- * the opinion that children are needed for the success in marriage (item cited = 1 versus not cited = 0);
- * agreement or strong agreement (=1) with the opinion that children should always love and respect their parents even if the latter do not deserve it versus all other responses (=0);
- * agreement (=1) with the statement that parents should always do their best for their children even at the expense of their own well-being, versus all other responses (=0);
- * disagreement (=1) with the statement that marriage is an outdated institution, versus all other opinions (=0);
- * the opinion that faithfulness is needed for the success of marriage (cited = 1, not cited = 0);
- * disapproval (=1) of women opting for motherhood without a stable relationship with a man, versus all other responses (=0).

These seven items are lifted from different batteries in the questionnaire and they could not convincingly be brought together in a smaller number of scales.

The MCA-results are reported in Table 1. The covariate of major importance to us is the current household position, since this variable should show the traces of the operation of the recursive effects between values and transitions in living arrangements. We particularly expect the intermediate living arrangements, i.e. living alone or cohabiting without parenthood, to be associated with weaker orientations toward family and children, and conversely that married couples or parents will display stronger "familistic" values. This expectation is born out most clearly for the opinions that children and faithfulness are essential for marital success and for the opinion that marriage is not an outdated institution (see items 2, 5 and 6 in Table 1 with beta coefficients of .21, .28 and .16). In these instances, respondents who are living alone and especially those cohabiting without children have the largest negative deviations from the mean on these expressions

supportive of conventional marriage and parenthood. Their negative deviations are furthermore more pronounced than those found among respondents who are still coresiding with their parents, indicating that the choices for living alone or for cohabitation are both predicated on such less familistic orientations and that these values are furthermore reinforced by these choices. Conversely, entry into marriage and parenthood strengthen the support for either the institution of marriage or for the meaning of having children. The latter is equally emerging from the results of item 1, for which unmarried or single parents are particularly stressing the utility of children for life fulfilment. Disapproval of single motherhood (item 7) is less discriminating, with only slightly higher disapproval being expressed by married couples with children.

The items pertaining to the mutual duties between the generations are best analyzed separately as well, the reason being that the outcomes are not symmetric. Over time, young adults have been downplaying their unconditional support for parents, but at the same time they are expecting greater unconditional support from them (see results for "year of survey" variable). As expected, respondents living alone or cohabiting without children have negative deviations from the mean, but the unmarried or lone parents expect more unconditional respect from children, but are least willing to give such support in return. As expected, married couples and parents express the strongest opinion in favour of unconditional intergenerational support in either direction.

There is also a differential trend with respect to the two items pertaining to non-material aspects of child utility. The opinion that children are essential for a woman's life fulfilment seems to lose ground, but the function of children in supporting a marriage is now being stressed more than before. The same also holds, and in a more pronounced way, for the item of faithfulness in marriage. Although fewer are making the transition to marriage, the opinion is gaining ground that a marriage - if there is going to be one - requires solid foundations in terms of individual commitment. It should again be noted that these trends are measured after controls for current living arrangement or marital status and that they are not just a side effect of differences in sample composition over time.

Finally, differentials linked to gender or socio-economic position are seldomly statistically significant, the main exception being that those in white collar jobs subscribe less to the

opinion that parents have the unconditional duty to support children than those in blue collar jobs or students, who actually may depend more on such support.

The footprints of the dual processes of selection and adaptation are equally detectable in other value orientations, and most clearly in the domains of ethics and civil morality, and in a variety of political indicators. Political scientists rarely focus on the dynamics of selection and adaptation in function of life course events, and even less on events connected to home leaving and the unfolding of living arrangements. The same holds for the literature of sociology of culture and of religion. The results for nine extra value dimensions indicate that such neglect is not justified.

The eleven values orientations brought together in a second set are operationalized as follows:

- * *Traditional religious beliefs*, based on belief in heaven (factor loading = .84), hell (.71), sin (.69), life after death (.66) and in God (.56). The scale has a high degree of consistency as indicated by Cronbach's alpha = .82.
- * *Individual religiosity*: this scale (alpha = .88) is based on the respondents' statements that religious sentiments are a source of strength and comfort (.72), that there are moments of prayer and meditation (.64), and that God occupies an important place in life (.59).
- * *Conservative ethics*, which corresponds to a rejection of interventions in matters of life and death, such as abortion (.65), euthanasia (.59) and suicide (.50). This scale furthermore captures aspects of conventional ethics such as the rejection of divorce (.72) and of homosexuality (.55) (alpha = .76).
- * *Civil morality*, captures strict adherence to social norms as expressed by the opinion that the following are never justified: accepting bribes (.57), joyriding (.56), claiming state benefits to which one is not entitled (.52), use of soft drugs (.50), and cheating on taxes (.45) (alpha = .66).
- * *Intolerance toward ethnic and other minorities*: this scale (alpha = .81) is based on the statement that the following groups are not wanted as neighbours: persons of a different race (.72), foreign laborers and immigrants (.70), persons with a criminal record (.46), large families (.43) or people with emotional problems (.41).
- * *Intolerance toward political extremists*, equally based on categories not wanted as neighbours, but in this instance persons with either right wing (.82) or leftist (.77) political convictions (alpha = .67).

- * *Protest proneness*, indicated by a participation or a willingness to participate in the occupying of buildings or factories (.74), wildcat strikes (.71), attending demonstrations (.68), joining in boycotts (.66), and signing petitions (.50) (alpha = .79).
- * *Distrust in institutions*, based on a four point rating of trust in the functioning of parliament (.60), the administration (.56), the press (.51), labour unions (.51) and of the police (.50). This scale (alpha = .72) measures distrust in these institutions ("no trust at all" has highest rating).
- * *Post-materialism*, based on Inglehart's (1970) four items scales with two "post-materialist" items (PM), i.e. "giving people more say in government decisions" and "protection of freedom of speech" as political priorities, versus the two "materialist" (M) items, being "maintaining order in the nation" and "fighting rising prices". Here, we have followed the conventional scoring procedure of the Inglehart scale, in which respondents picking the two PM-items out of the four are given a score of +1, those picking the two M-items a score of -1, and those with a mixed choice a score of zero.
- * *Expressive work values*, based on those job elements that are cited as important: opportunity to display initiative (.64), job meeting one's abilities (.63), a job in which one can achieve something (.57), responsibility (.55), with interesting function (.53), a useful job for society (.47), meeting people (.50), work respected by others (.43), promotion chances (.41) and pleasant collaborators (.31). This scale (alpha = .81) measures non-material aspects of job satisfaction and meaning related to expressive individualism.
- * *Material job motivations*, also based on job elements considered as important, but related to material and non-expressive aspects: generous holidays (.69), good hours (.61), not too much pressure (.52), and good job security (.44) (alpha = .67).

The MCA results are brought together in Tables 2, 3 and 4. All scales are expressed in z-scores, except for the Inglehart post-materialism scale for which the conventional scoring yields the surplus or deficit of the percentage of respondents with a "pure" PM-profile over the percentage with a "pure" M-choice.

The expectation is that there is a double and mutually reinforcing selection/adaptation process for home leavers moving to living alone and into cohabitation. Firstly, they are overselected, controlling for all other covariates, on the basis of broader value orientations stressing secularism, individualistic ethical autonomy, tolerance and non-exclusion,

postmaterialism and expressive individualism in politics and work values. Secondly, the transition to these living arrangements strengthens the same value orientations (adaptation = affirmation). As a consequence we expect the respondents in these household positions to stand out quite clearly in cross-sectional results. Moreover, persons living alone or cohabiting (without children) should score higher on these value orientation than individuals still living with their parents, which would indeed suggest the operation of a selection effect in the expected direction.

Conversely, we also expect that individuals moving directly into marriage are strongly selected in favour of higher religiosity, conventional ethics, less tolerance, more "materialism" (in Maslow's or Inglehart's sense), less accentuation of expressive individualism and more trust in institutions or greater respect for authority. Marriage itself would furthermore strengthen these orientations, so that for them too there is a double, reinforcing effect, but in the opposite direction.

For those who move into marriage and into parenthood via the "intermediate" living arrangements, the prediction is that they adjust their initially more unconventional orientations in the direction of more conventional ones (adaptation = negation). Marriage and parenthood then lead to a conservative correction, but the overall balance would be less pronounced than for those who never passed through the intermediate living arrangements. Unfortunately, the latter implication cannot be tested with the BVS-data since the surveys for 1981 and 1990 did not probe for earlier states via the simple "ever cohabited", "ever lived alone", or "ever divorced"-type of questions. The traces of the ideational trajectory are therefore less clear in this cross-section for all those who are now brought together into the currently married category. In the 1999-round the "ever"-probes were asked in Belgium and the Netherlands, but small sample sizes for the age group 20-29 warrant the pooling of these two national data sets and an additional analysis.

The MCA-results are highly consistent with these expectations. Controlling for age, sex, education and socio-economic position, young Belgian adults who live by themselves or who are in a consensual union, but who are not yet parents, stand out very clearly during the three survey rounds from both those who are still living with parents (effect of selection) and from those who have advanced to marriage and especially to parenthood. They do so most clearly with respect to:

- less conventional ethics (deviations of $-.10$ for living alone and $-.27$ sigma for cohabitants) than any other category;
- considerably reduced accentuation of civil morality (deviation = $-.25$ and $-.23$ sigma);
- less intolerance toward ethnic and social minorities ($-.11$ and $-.06$), and conversely a greater rejection of political extremists ($+.19$ and $+.05$), who, within the Belgian context, are predominantly of the right wing ethnocentric type;
- considerably higher protest proneness ($+.28$ and $+.33$ sigma), and higher distrust in institutions ($+.36$ and $+.09$ sigma);
- a stronger "post-materialist" profile with an excess of 22 and 5 percentage points more PM than M compared to the mean ($+7.2\%$);
- a stronger accentuation of the expressive work values ($+.14$ and $+.09$ sigma), and particularly a much weaker citing of the material job aspects as being important ($-.27$ and $-.25$ sigma).

As far as the religiosity dimensions are concerned, young adults who live alone or cohabit score lower on the traditional beliefs scale than average ($-.09$ and $-.02$ sigma), but the overall distinctions across household positions are weaker than for the other dimensions. The same also holds for the more personal sense of religiosity, for which the presumed selection-effect still seems to be operative for cohabitants without children ($-.15$ sigma), but not for those living alone ($+.02$ sigma). The latter may need such religiously oriented sentiment to compensate for more solitude and weaker life satisfaction.

Respondents who are in the other "unconventional" household positions, i.e. cohabitants with children (not necessarily their own) or single parents, also have clearly patterned profiles. They adhere very strongly to traditional religious beliefs ($+.13$ sigma) but score low on the individual sense of religiosity ($-.20$). They have, furthermore, equally conventional views on ethics ($+.10$), and civil morality ($+.17$), have more outspoken right wing political convictions ($+.23$ sigma on intolerance for minorities and $-.34$ sigma on rejection of political extremism), considerably lower protest-proneness, and, less surprisingly, the strongest accentuation of good material working conditions. This is a profile that corresponds best with that of the lower educated and blue collar strata in Belgian society (see results according to education and profession), but these outcomes according to household positions are *net* of such additional social stratification effects.

As far as *trends* among successive incoming cohorts are concerned, there are essentially four patterns:

1. There is a *steady rise* since 1981 in the rejection of political extremism and even more so in protest proneness. Younger cohorts have become more vocal.
2. For most dimensions considered here, there is a larger leap for incoming cohorts between 1981 and 1990, and then a *leveling off* for the young adults of 1999. The latter then resemble their immediate predecessors, as we had expected in an earlier analysis for a larger number of countries (Lesthaeghe and Moors, 1995b). This pattern with a loss of momentum applies most to the decline in individual religious sentiment, the rise in ethics in favour of greater individual control over life and death, the rise in postmaterialism and the accentuation of expressive work values. This may suggest that the "big battles" for more individuality and individual autonomy are largely over for the more recent Belgian incoming cohorts.
3. There is a *trend reversal* or at least a temporary reaction among the latest cohort of young adults against lowered standards of civil morality and against increasing demands made by employers or firms. These reactions take the form of greater accentuation of proper public conduct and of less demanding working conditions. As these value orientations pertain less to deeper individual convictions and more to contextual conditions, they may be more prone to reflect temporary period effects only. There is also a trend reversal, but then in the opposite direction, for traditional religious beliefs. Secularism measured via these aspects of formal religion has again progressed more rapidly during the 1990s than in the previous decade.
4. Finally, there is essentially a *flat trend* for trust in institutions. However, this is a feature encountered among young adults only. Respondents at older ages and particularly above 50 in Belgium have displayed a very pronounced and continuous increase in distrust in institutions that even outspaced their loss of belief in the content of formal religion. Apparently, a loss of trust in institutional contexts came at later stages in life for cohorts that have known the pre-1960s era, whereas such trust already started at low levels for those born after 1950.

Aside from the main effects reported in the MCA-tables, we have also tested all two-way interactions between covariates. In doing so, we were particularly interested in the interactions between year of survey and the others. Of such possible 55 interaction terms, none turned out to be significant, not even at the .05 level. This suggests that the

patterning of the 11 value orientations according to household position, sex and socio-economic markers have been rather stable over time for respondents 20-29. On the basis of the admittedly small Belgian sample we cannot conclude that the demographic expansion of numbers living in non-conventional living arrangements have led to an appreciable restructuring of the values based selection and adjustment mechanisms. An extension of the analysis to the data for other comparable Western European countries is necessary before formulating firmer conclusions for this issue of effects of shifting population composition over time.

Finally, we have not paid attention to the other covariates so far. From the MCA-results it is evident that other transitions linked to educational paths, entry into the labour force and acquiring a socio-economic status do have appreciable effects as well. These transitions may equally be linked to values based selection and produce subsequent ideational restructuring of individual positions, but the discussion of these features falls outside the scope of this paper. Also, analyses of panel data linking values to socio-economic rather than to household transitions are equally needed to restore a proper balance.

5. Conclusions

In the social sciences several paradigms have been living side by side and either trivialized the role of value orientations (e.g. neo-classic economics) or overstressed it to the point of producing teleological theory (e.g. functionalist anthropology and sociology). Treatments of this nature now look outdated. Current approaches use more sophisticated models. First, the socio-psychological views lend themselves to the construction of more dynamic models in which value orientations have both an impact on choices and are either strengthened or altered by such decisions. In such models, the time axis (life course unfolding) is added together with a recursive relationship between values and decisions or events. Furthermore, also the addition of cohort-effects and the study of values stability in cohorts has enhanced the understanding of alternative models of cultural reproduction.

The departure from the older antagonistic paradigms has received considerable support from empirical research based on statistical analyses of repeated cross-sectional surveys and of panel data. Especially the latter have been instrumental in documenting that value orientations have an undeniable predictive power relative to later decisions (which ought to

silence the sceptics). At the same time, such analyses have also shown that values are not frozen but adaptable in function of earlier decisions (which cautions against too much enthusiasm as well). With relatively few exceptions, however, users of panel data have either focussed on the selection effect (values as predictors of later events) or on adaptation effects (events as determinants of changes in values orientations). Models for panel data analysis, with either cross-lagged or simultaneous effects and with events as intermediate variables, do permit a more holistic approach of this double process of recursive causation. This is now bound to be enhanced by the availability of suitable software. However, panel data are expensive and laborious to collect, and few organizers - particularly in Europe - have included, if at all, sufficiently thought out values batteries in the questionnaires used so far. Also here, there is room for advancement.

Repeated cross-sections do not permit the separation of values-based selection from *ex post* values adaptation. But once the dynamics of the recursive relationship are understood, thanks to analyses of panel data, one can more easily detect the footprints of such selection and adaptation in cross-sections and also, at a smaller cost, follow more aggregate trends. In short, panels permit the dissection of the recursive relationships, whereas repeated cross-sections focus on overall outcomes over time in tandem with changes in values profiles according to individual position variables.

In this chapter we have illustrated on the basis of the three Belgian Values Studies of 1981, 1990 and 1999 that the overall association between different paths in the process of household formation and values orientations has remained remarkably stable over time, and even more importantly, that values in very diverse domains (religion, ethics, gender roles, intergenerational relations, politics and work) are all involved in the selection/adaptation process. Finally, there are also clear traces of such mechanisms being operative not only in the area of household formation and demographic outcomes, but also with respect to socio-economic positions (education, economic activity, professional category). If that is the case, then values matter for all important choices in life, and all such choices lead either to the strengthening of previously held convictions or to their adjustment. This is more in tune with insights from phenomenological psychology than with the oversimplified models of old paradigms in economics or sociology.

6. References

- Almond, B. and B. Wilson (1988). Values - A symposium. Atlantic Highlands N.J., Humanities Press.
- Alwin, D. (1988). "From obedience to autonomy: changes in traits desired in children, 1924 to 1978." *Public Opinion Quarterly* **52**: 33-52.
- Alwin, D. (1989). "Changes in qualities valued in children in the United States, 1964 to 1984." *Social Science Research* **44**(2): 1-42.
- Alwin, D. (1990). "Historical changes in parental orientations to children." *Sociological Studies of Child Development* **3**: 65-86.
- Alwin, D. (1991). "Ageing, cohort and social change - An examination of the generational replacement model of social change." *Utrecht University Master Class on Dynamics of Cohort and Generation Research, Utrecht, Dec. 12-14, 1991*.
- Alwin, D. (1992). Attitude development in adulthood - The role of generational and life-cycle factors. The relevance of attitude measurement in sociology. D. Krebs and P. Schmidt. Frankfurt & New York, Springer Verlag: 57-89.
- Alwin, D. and A. Thornton (1984). "Family origins and the schooling process: early versus late influences of parental characteristics." *American Sociological Review* **49**: 784-802.
- Aquilino, W. S. (1991). "Family Structure and home-leaving: a further specification of the relationship." *NSFH Working Paper 43, University of Wisconsin, Madison WI*.
- Ariès, P. (1962). Centuries of childhood - A social history of family life. New York, Random House.
- Axinn, W. and A. Thornton (1992). "The influence of parental resources on the timing of the transition to marriage." *Social Science Research* **21**: 261-285.
- Axinn, W. G. and A. Thornton (1993). "Mothers, children and cohabitation - The intergenerational effect of attitudes and behavior." *American Sociological Review* **58**: 233-246.
- Barber, J. (1999). "Intergenerational influences on the entry into parenthood: Mothers' preferences for family and non-family behavior." *Paper presented at the Annual Meetings of the Population Association of America, Los Angeles*.
- Barber, J. S. (1998). "Ideational influences on the transition to parenthood - Attitudes toward childbearing and competing alternatives." *Paper presented at the Annual Meetings of the Population Association of America, New York*.
- Beck, P. and M. Jennings (1975). "Parents as middlepersons in political socialization." *The Journal of Politics* **37**: 83-107.
- Becker, G. S. and G. J. Stigler (1977). "De gustibus non est disputandum." *American Economic Review* **67**(2): 76-90.
- Ben Porath, Y. (1980). "The F-connection: families, friends and firms." *Population and Development Review* **6**(1): 1-30.
- Bengtson, V. L. (1975). "Generation and family effects in value socialization." *American Sociological Review* **40**: 358-371.
- Bulatao, R. A. (1979). "On the nature of the transition in the value of children." *Papers of the East-West Population Institute, 60-A, East-West Center, Honolulu*.
- Bumpass, L. (1990). "What's happening to the family? Interactions between demographic and institutional changes." *Demography* **27**(4): 483-498.
- Castles, S. and G. Kozack (1973). Immigrant workers and class structure in Western Europe. London, Oxford University Press.
- Cherlin, A., K. Kiernan, et al. (1995). "Parental divorce in childhood and demographic outcomes in young adulthood." *Demography* **32**: 299-318.
- Clarkberg, M., R. M. Stolzenberg, et al. (1993). "Attitudes, values and the entrance into cohabitational unions." *Research report, Population Research Center, NORC & The University of Chicago, Chicago IL*.
- Coale, A. J. (1973). "The demographic transition reconsidered." *IUSSP: Proceedings of the International Population Conference, Liège: Eds. Ordina*.
- Converse, P. (1964). The nature of belief systems among mass publics. Ideology and discontent. D. Alter. New York, The Free Press: 201-261.
- Corijn, M. (1996). "Transition into adulthood in Flanders." *NIDI-CBGS Monograph nr. 32, The Hague & Brussels*: 216 p.
- Crimmins, E., R. Easterlin, et al. (1991). "Preference change among American youth: family, work and goods aspirations, 1978-1986." *Population and Development Review* **17**: 115-133.
- de Feyter, H. (1991). "Voorlopers bij demografische veranderingen." *NIDI-report 22, Netherlands Interdisciplinary Demographic Institute, The Hague*.
- Delumeau, J. (1983). Le péché et la peur - La culpabilisation en Occident, XIIIe-XVIIIe siècles. Paris, Fayard.

- Easterlin, R. and E. Crimmins (1991). "Private materialism, personal self-fulfilment, family life and public interest: the nature, effects and causes of recent changes in the values of American youth." *Public Opinion Quarterly* **55**: 499-533.
- Finkel, S. E. (1995). Causal analysis with panel data. Thousand Oaks & London, Sage Publications.
- Firebaugh, G. (1997). Analyzing repeated surveys. Thousand Oaks & London, Sage Publications.
- Galloway, P., E. Hammel, et al. (1994). "Fertility decline in Prussia, 1875-1910: a pooled cross-section time series analysis." *Population Studies* **48**(1): 135-158.
- Gecas, V. and M. Seff (1990). "Families and adolescents - A review of the 1980s." *Journal of Marriage and the Family* **52**: 941-958.
- Goldscheider, F. and C. Goldscheider (1993). Leaving home before marriage - Ethnicity, familism and generational relationships. Madison, University of Wisconsin Press.
- Goldscheider, F. K. and C. Goldscheider (1989). "Family structure and conflict: nest-leaving expectations of young adults and their parents." *Journal of Marriage and the Family* **51**: 87-97.
- Hammel, E. A. (1990). "A theory of culture for demography." *Population and Development Review* **16**: 455-485.
- Hammel, E. A. (1993). "Economics 1, culture 0 - Factors in early fertility decline in the Northwest Balkans." *Working Paper 34, Program in Population Research, Berkeley: University of California*.
- Inglehart, R. (1970). The silent revolution. Princeton N.J., Princeton University Press.
- Inglehart, R. (1985). "Aggregate stability and individual flux - The level of analysis paradox." *American Political Science Review* **79**: 97-116.
- Inglehart, R. (1990). Culture shift in advanced industrial society. Princeton N.J., Princeton University Press.
- Kiernan, K. (1992). "The impact of family disruption in childhood on transitions made in young adult life." *Population Studies* **46**: 213-234.
- Kirk, D. (1996). "Demographic transition theory." *Population Studies* **50**(361-387).
- Klecka, W. R. (1971). "Applying political generations to the study of political behaviour - A cohort analysis." *Public Opinion Quarterly* **35**: 358-373.
- Kobrin-Goldscheider, F. and J. Davanzo (1986). "Semi-autonomy and leaving home in early adulthood." *Social Forces* **65**(1): 187-201.
- Kobrin-Goldscheider, F. and L. Waite (1987). "Nest-leaving patterns and the transition to marriage for young men and women." *Journal of Marriage and the Family* **49**: 507-516.
- Kohn, M. L. (1977). Class and conformity - A study in values. Chicago, Ill., University of Chicago Press.
- Lakatos, I. (1970). Falsification and the methodology of scientific research programmes. Criticism and the growth of knowledge. I. Lakatos and A. Musgrave. Cambridge, Cambridge University Press: 91-196.
- Lakatos, I. (1978). The methodology of scientific research programmes. Cambridge, Cambridge University Press.
- Lautmann, R. (1971). Wert und Norm - Begriffsanalyse für die Soziologie. Opladen, West-deutschen Verlag.
- Lesthaeghe, R. (1977). The decline of Belgian fertility, 1800-1970. Princeton NJ, Princeton University Press.
- Lesthaeghe, R. (1992). Beyond economic reductionism: the transformation of the reproductive regimes in France and Belgium in the 18th and 19th centuries. Fertility transition, family structure & population policy. C. Goldscheider. Boulder Co., Westview Press: 1-44.
- Lesthaeghe, R. (1998). "On theory development - Application to the study of family formation." *Population and Development Review* **24**(1): 1-14.
- Lesthaeghe, R. and D. Meekers (1986). "Values changes and the dimensions of familism in the European Community." *European Journal of Population* **2**: 225-268.
- Lesthaeghe, R. and G. Moors (1994). "Living arrangements and parenthood - Do Values matter? Values in Western Societies. R. de Moor. Tilburg, Tilburg University Press: 217-250.
- Lesthaeghe, R. and G. Moors (1995a). Living arrangements, socio-economic position and values among young adults: a pattern description for France, Germany, Belgium and the Netherlands 1990. Europe's population in the 1990s. D. Coleman. Oxford, Oxford University Press: chapter 6.
- Lesthaeghe, R. and G. Moors (1995b). Is there a new conservatism that will bring back the old family? Ideational trends and the stages of family formation in Germany, France, Belgium and the Netherlands, 1981-1990. Evolution or revolution in European population. Milan, Franco Angeli s.v.l.: 225-266.
- Lesthaeghe, R. and J. Surkyn (1988). "Cultural dynamics and economic theories of fertility change." *Population and Development Review* **14**(1): 1-45.
- Lesthaeghe, R. and C. Vanderhoeft (1997). Une conceptualisation des transitions vers de nouvelles formes de comportements. Théories, paradigmes et courants explicatifs en démographie. D. Tabutin, C. Courbin, G. Masuy-Stroobant and B. Schoumaker. Louvain-la-Neuve, Academia-Bruylant & Editions L'Harmattan: 279-306.

- Lesthaeghe, R. and C. Wilson (1986). Modes of production, secularization and the pace of the fertility decline in Western Europe. The decline of fertility in Europe. A. J. Coale and S. C. Watkins. Princeton, Princeton University Press: 261-292.
- Liefbroer, A. (1991). "Choosing between a married and an unmarried first union among young adults: a competing risk analysis." *European Journal of Population* **7**: 273-298.
- Liefbroer, A. (1999). From youth to adulthood - Understanding changing patterns of family formation from a life course perspective. Population Issues - An interdisciplinary focus. L. Van Wissen and P. Dykstra. New York, Plenum Press: 53-85.
- Liefbroer, A. C., M. Corijn, et al. (1996). "Similarity and diversity in the start of the family formation process in the Low Countries." *Centrum voor Bevolkings- en Gezinsstudien, CBGS-monografie* 96-3.
- Livi-Bacci, M. (1971). A century of Portuguese fertility. Princeton NJ, Princeton University Press.
- Livi-Bacci, M. (1977). A history of Italian fertility during the last two centuries. Princeton NJ, Princeton University Press.
- Lye, D. N. and I. Waldron (1993). "Correlates of attitudes toward cohabitation, family and gender roles." *Seattle Population Research Center Working Paper 93-10, University of Washington & Battelle, Seattle, WA*.
- Mannheim, K. (1928). "Das Problem der Generationen." *Kölner Vierteljahresheft für Soziologie* **7**: 154-184, 309-330.
- Manting, D. (1994). "Dynamics in marriage and cohabitation - An inter-temporal life course analysis of first union formation and dissolution." *PhD-dissertation*.
- Marini, M. M. (1984). "Age and sequencing norms in the transition to adulthood." *Social Forces* **63**: 229-244.
- Marini, M. M. (1990). "The rise of individualism in advanced industrial societies." *Paper presented at the Annual Meetings of the Population Association of America, Toronto*.
- Markus, G. B. (1979). Analyzing panel data. Beverley Hills & London, Sage Publications.
- Maslow, A. (1954). Motivation and personality. New York, Harper and Row.
- Michael, R. T. and N. Tuma (1985). "Entry into marriage and parenthood by young men and women: the influence of family background." *Demography* **22**: 515-544.
- Miller, W. B. (1992). "Personality traits and developmental experiences as antecedents of childbearing motivation." *Demography* **29**(2): 265-285.
- Moors, G. (1996). "The valued child - The effects of values on the transition to motherhood." *Stockholm Research Reports in Demography, University of Stockholm nr. 107*.
- Moors, G. (1997). "The dynamics of values-based selection and values adaptation." *PhD-dissertation, Faculty of Economic, Social and Political Sciences, Vrije Universiteit Brussels*.
- Moors, G. (1998). "Valued choices and chosen values - On the recursive relationship between values orientations and family formation." *Unpublished - to be completed*.
- Moors, G. (1999). Family theory: the role of changing values. International Encyclopedia of the Social and Behavioral Sciences, Elsevier, forthcoming.
- Newcomb, T. (1943). Personality and social change - Attitude formation in a student community. New York, Dryden Press.
- Newcomb, T., K. Koenig, et al. (1967). Persistence and change - Bennington College and its students after 25 years. New York, John Wiley & Sons.
- Oppenheim Mason, K. (1992). "Culture and fertility transition; thoughts on theories of fertility decline." *Genus* **40**: 1-14.
- Piaget, J. (1932). The moral development of the child. New York, Free Press.
- Pollack, R. (1976). "Interdependent preferences." *American Economic Review* **66**: 309-320.
- Pollack, R. A. (1985). "The transaction cost approach to families and households." *Journal of Economic Literature* **23**: 581-608.
- Pollack, R. A. and S. C. Watkins (1993). "Cultural and economic approaches to fertility : a proper marriage or mesalliance?" *Population and Development Review* **19**(3): 467-496.
- Preston, S. (1986). "Changing values and falling birth rates." *Population and Development Review* **12**(supplement).
- Rokeach (1973). The nature of human values. New York, Free Press.
- Rokeach, M. (1979). Understanding human values: individual and societal. London, Collier Macmillan.
- Ryder, N. B. (1965). "The cohort as a concept in the study of social change." *American Sociological Review* **30**: 843-861.
- Sandefur, G. D. and S. S. McLanahan (1990). "Family background, race and ethnicity and early family formation." *Institute for Research and Poverty, discussion paper 911-90, University of Wisconsin, Madison*.
- Sears, D. O. (1981). Life-stage effects on attitude change, especially among the elderly. Aging and Social Change. S. Kiesler. New York, Academic Press: 183-204.

- Spates, J. L. (1983). "The sociology of values." *Annual Review of Sociology* **9**: 27-49.
- Stone, L. (1977). The family - Sex and marriage in England, 1500-1800. New York, Harper and Row.
- Thomson, E. and U. Colella (1992). "Cohabitation and marital stability - Quality or commitment?" *Journal of Marriage and the Family* **54**: 259-267.
- Thornton, A. (1985). "Reciprocal influences of family and religion in a changing world." *Journal of Marriage and the Family* **47**: 381-394.
- Thornton, A. (1991). "Influence of the marital history of parents on the marital and cohabitational experience of children." *American Journal of Sociology* **96**: 868-894.
- Thornton, A. (1992). The influence of the parental family on the attitudes and behavior of children. The changing American family: sociological and demographic perspectives. S. J. South and S. E. Tolnay. Boulder CO, Westview Press: 247-266.
- Thornton, A., D. F. Alwin, et al. (1983). "Causes and consequences of sex-role attitudes and attitude change." *American Sociological Review* **48**: 211-227.
- Thornton, A., W. G. Axinn, et al. (1992). "Reciprocal effects of religiosity, cohabitation and marriage." *American Journal of Sociology* **98**(3): 628-651.
- Thornton, A. and D. Camburn (1987). "The influence of the family on premarital sexual attitudes and behavior." *Demography* **24**(3): 323-340.
- Thornton, A. and D. Camburn (1989). "Religious participation and adolescent sexual behavior and attitudes." *Journal of Marriage and the Family* **51**(641-653).
- Van Berkel - van Schaik, A. and L. van Snippenburg (1991). "Sociaal-historische generaties - Verbeelding of empirische werkelijkheid? Een toets van een generatiethese." *Sociologische Gids* **38**: 227-248.
- van de Kaa, D. J. (1996). "Anchored narratives: the story and findings of half a century of research into the determinants of fertility." *Population Studies* **50**: 389-432.
- van Ryssel, R. (1989). "Developments in attitudes and values orientations - A comparison between birth cohorts in the Netherlands over the period 1970-1985." *Symposium on Life Histories and Generations, Netherlands Institute for Advanced Studies (NIAS), Wassenaar, June 22-23, 1989*.
- Vinovkis, M. A. (1987). Historical perspectives on the development of the family and parent-child interactions. Parenting across the life span - Biosocial dimensions. J. B. e. a. Lancaster. New York, Aldine - De Gruyter: 295-312.
- Waite, L., F. Kobrin-Goldscheider, et al. (1986). "Nonfamily living and the erosion of traditional family orientations among young adults." *American Sociological Review* **51**: 541-554.
- Weinstein, M. and A. Thornton (1989). "Mother-child relations and adolescent sexual attitudes and behavior." *Demography* **26**(4): 563-577.
- Wu, L. L. and C. Martinson (1991). "Family structure and the risk of a premarital birth." *NSFH-working paper 45, Center for Demography and Ecology, University of Wisconsin, Madison WI*.
- Zelizer, V. A. (1985). Pricing the priceless child - The changing social value of children. New York, Basic Books.

Table 1: Net effects of covariates on value items concerning the need for children, marriage and intergenerational duties, MCA results for Belgian respondents aged 20-29, pooled samples (1981, 1990, 1999): percentage points deviations from the mean

Covariate	1. Women need children for life fulfilment Mean = 34%	2. Children are needed for success of marriage Mean = 50%	3. Children should love & respect parents unconditionally Mean = 65%	4. Parents have unconditional duty to support children Mean = 63%	Sample sizes N = 750
1. Household position (beta coeff.)	(.12 ns)	(.21***)	(.10 ns)	(.11 ns)	
- living with parents	-6%	-4	1	-2	278
- living alone	8	-9	-7	-10	57
- cohabiting, 0 children	-1	-19	-13	-2	62
- not married + children	13	2	5	-9	40
- married, 0 children	-3	-6	2	2	89
- married + children	4	15	3	7	225
2. Year of survey	(.09 ns)	(.08 ns)	(.10*)	(.25***)	
- 1981	7	-6	5	-8	191
- 1990	-1	0	2	-8	332
- 1999	-4	5	-7	18	227
3. Sex	(.10**)	(.08*)	(.00 ns)	(.03 ns)	
- male	5	-4	0	2	367
- female	-5	4	0	-2	383
4. Employment	(.05 ns)	(.00 ns)	(.05 ns)	(.03 ns)	
- employed	-2	0	-2	1	441
- not employed	3	0	3	-2	310
5. Profession	(.08 ns)	(.04 ns)	(.08 ns)	(.14*)	
- upper white collar	11	1	-1	-4	71
- middle & lower white collar	-1	-1	-1	-10	186
- blue collar	-3	3	5	3	240
- other	1	-2	-4	5	254
6. Age at end education	(.12*)	(.05 ns)	(.05 ns)	(.03 ns)	
- 16 or less	6	-5	-2	3	131
- 17-18	7	0	4	-1	196
- 19+	-5	2	-1	0	424
R² & sign. model	.05**	.06***	.04 ns	.07***	

Note: model also contains control for age and age squared
ns = not significant; * = p [.05; ** p [.01; *** p = [.001

Table 1: continued

Covariate	5. Marriage is NOT an outdated institution Mean = 70%	6. Faithfulness necessary for success of marriage Mean = 86%	7. Disapproval of single motherhood Mean = 35%
1. Household position (beta coeff.)	(.28 ***)	(.16**)	(.06 ns)
- living with parents	-4	-3	-3
- living alone	-6	-11	-2
- cohabiting, 0 children	-25	-6	2
- not married + children	-23	3	2
- married, 0 children	.13	6	-1
- married + children	.12	5	4
2. Year of survey	(.02 ns)	(.15 ***)	(.07 ns)
- 1981	-1	-3	-5
- 1990	0	-3	2
- 1999	0	8	2
3. Sex	(.05 ns)	(.03 ns)	(.06 ns)
- male	-2	-1	3
- female	2	1	-3
4. Employment	(.11*)	(.12*)	(.03 ns)
- employed	4	3	1
- not employed	-6	-5	-2
5. Profession	(.04 ns)	(.10 ns)	(.10 ns)
- upper white collar	-4	-7	11
- middle & lower white collar	0	-3	-7
- blue collar	0	1	-3
- other	2	3	4
6. Age at end education	(.01 ns)	(.09 ns)	(.03 ns)
- 16 or less	-1	3	3
- 17-18	0	-5	0
- 19+	0	1	1
R² & sign. model	.08***	.06*	.02 ns

Note: model also contains control for age and age squared
ns = not significant; * = p [.05; ** p [.01; *** p = [.001

Table 2: Net effects of covariates on religious and ethical value dimensions, MCA-results for Belgian respondents aged 20-29, pooled samples (1981, 1990, 1999): deviations from the mean in sigma

Covariate	1. Religiosity: traditional beliefs	2. Religiosity: meaning in personal life	3. Ethics: rejection of control over life/death	4. Civil morality: inacceptability of deviance	Sample sizes N = 805
1. Household position (beta coeff.)	(.07 ns)	(.08 ns)	(.13 ns)	(.19***)	
- living with parents	-.04	.00	-.06	-.14	305
- living alone	-.09	.02	-.10	-.25	66
- cohabiting, 0 children	-.02	-.15	-.27	-.23	66
- not married + children	.13	-.20	.10	.17	42
- married, 0 children	-.06	.07	.11	.26	93
- married + children	.08	.05	.06	.19	233
2. Year of survey	(.11*)	(.15***)	(.20***)	(.09ns)	
- 1981	-.01	.23	.29	.13	203
- 1990	.09	-.09	-.10	-.08	365
- 1999	-.12	-.06	-.10	.07	237
3. Sex	(.06 ns)	(.06 ns)	(.00 ns)	(.06 ns)	
- male	.04	-.05	.00	-.06	413
- female	-.04	.06	.00	.06	393
4. Employment	(.02 ns)	(.07 ns)	(.06 ns)	(.04 ns)	
- employed	-.01	-.05	-.05	.03	474
- not employed	.02	.07	.07	-.04	331
5. Profession	(.10 ns)	(.15** ns)	(.07 ns)	(.05 ns)	
- upper white collar	.08	.02	-.00	.09	76
- middle & lower white collar	-.06	.21	-.02	.05	198
- blue collar	.10	-.15	.08	-.02	258
- other	-.07	-.01	-.06	-.04	273
6. Age at end education	(.05 ns)	(.08 ns)	(.11*)	(.04 ns)	
- 16 or less	.04	-.16	.02	-.05	137
- 17-18	-.10	.00	.15	.07	205
- 19+	.03	.04	-.07	-.02	463
R² & sign. model	.03 ns	.08***	.10***	.07*	

Note: model also contains control for age and age squared
ns = not significant; * = p [.05; ** p [.01; *** p = [.001

Table 3: Net effects of covariates on political dimensions, MCA-results for Belgian respondents aged 20-29, pooled samples (1981, 1990, 1999): deviations from the mean in sigma

Covariate	5. Intolerance toward ethnic & other minorities	6. Intolerance toward political extremists	7. Protest-proness	8. Distrust in institutions	9. Post-materialism (%PM-%M) deviations from mean (=7.2%) in percentage points
1. Household position (beta coeff.)	(.09 ns)	(.12*)	(.20***)	(.14*)	(.18**)
- living with parents	.05	-.07	.09	-.08	7
- living alone	-.11	.19	.28	.36	22
- cohabiting, 0 children	-.06	.05	.33	.09	5
- not married + children	.23	-.34	-.17	.06	0
- married, 0 children	-.01	.03	-.14	.09	-.12
- married + children	-.05	.07	-.20	-.06	-.13
2. Year of survey	(.08 ns)	(.29***)	(.13***)	(.02 ns)	(.13***)
- 1981	-.12	-.34	-.19	.02	-.11
- 1990	.04	.03	.01	.01	8
- 1999	.04	.24	.15	-.03	3
3. Sex	(.03 ns)	(.03 ns)	(.14***)	(.06 ns)	(.12***)
- male	-.02	.03	.13	.06	7
- female	.02	-.03	-.14	-.06	-8
4. Employment	(.03 ns)	(.03 ns)	(.10*)	(.01 ns)	(.04 ns)
- employed	.03	.02	-.08	-.01	2
- not employed	-.04	-.03	.12	.01	-3
5. Profession	(.04 ns)	(.15**)	(.13**)	(.10 ns)	(.13*)
- upper white collar	.03	-.03	-.07	.25	-3
- middle & lower white collar	.00	.21	.21	-.06	5
- blue collar	.04	-.16	-.10	-.06	-.11
- other	-.05	.00	-.04	.03	8
6. Age at end education	(.06 ns)	(.05 ns)	(.13**)	(.02 ns)	(.10*)
- 16 or less	.00	.01	-.05	.00	-3
- 17-18	.08	-.08	-.19	.02	-2
- 19+	-.04	.03	.10	-.01	5
R² & sign. model	.03 ns	.10***	.14***	.03***	.11***

Note: model also contains control for age and age squared; sample sizes: see table 1 N=805, but N = 775 for Inglehart PM scale; ns = not significant; * = p [.05; ** p [.01; *** p = [.001

Table 4: Net effects of covariates on dimensions related to the meaning of work and elements of job satisfaction, MCA-results for Belgian respondents aged 20-29, pooled samples (1981, 1990, 1999): deviations from the mean in sigma

Covariate	10. Expressive work values: self actualization and responsibility	11. Material job motivations and work conditions
1. Household position (beta coeff.)	(.10 ns)	(.13*)
- living with parents	.06	.01
- living alone	.14	-.27
- cohabiting, 0 children	.09	-.25
- not married + children	.11	.12
- married, 0 children	-.07	.01
- married + children	-.14	.11
2. Year of survey	(.12***)	(.09*)
- 1981	-.20	.09
- 1990	.05	-.10
- 1999	.09	.08
3. Sex	(.05 ns)	(.01 ns)
- male	.05	-.01
- female	-.05	.01
4. Employment	(.02 ns)	(.06 ns)
- employed	-.02	.05
- not employed	.03	-.07
5. Profession	(.13***)	(.20***)
- upper white collar	.25	-.37
- middle & lower white collar	.15	-.14
- blue collar	-.08	.24
- other	-.10	-.02
6. Age at end education	(.14***)	(.05 ns)
- 16 or less	.05	.03
- 17-18	-.22	.07
- 19+	.11	-.04
R² & sign. model	.10***	.09***

Note: model includes controls for age and age squared; sample sizes: see table 1 (N = 805)

ns = not significant; * = p [.05; ** p [.01; *** p [.001