

Modeling Life Course Structure: The Triple Helix

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Abstract

Researching the life course—the way our lives are structured into particular stages and sequences—opens up a huge range of issues and perspectives. I begin with selected synoptic approaches that give a sense of this multidimensionality, such as the levels at which it applies and the linkages between individual life courses and their social contexts. I discuss particular concepts that figure prominently in the analytical toolbox of life course research, notably stages, transitions, and trajectories. The following part concentrates on the way models and metaphors can be applied to life course research. Metaphorical thinking can be a fruitful way of illuminating complex issues; we need, however, to be clear about what kinds of claim are being made for such metaphors and models.

I introduce the image of a triple helix, analogous to the famous DNA double helix but with three strands—biological, psychological, and social. This simple image allows us to model the changing interrelationships between these, mapped against chronological age. The central focus is not on the changes within each strand but on the changes which these entail in the relationships between the different strands. Entry into adulthood and becoming old are two examples where these relationships are obviously altering significantly. The triple helix acts as a device for exploring life course change, and as a means of defining significant issues.

INTRODUCTION

Life course research potentially covers just about every aspect of our lives: as biological entities, as human beings each with our individual make-up, and as members of families, populations, and societies with particular cultural and historical features. Depicting these levels and dimensions in a way that grasps their changing interactions is a permanently elusive goal. This essay aims to provide one simple way of modeling the life course and especially its dynamics; the metaphor of the triple helix enables us to examine and reflect on the changing relationships between different strands of development.

I begin with a highly selective overview of the temporal dimensions used in some more general synopses of life course research. This includes brief consideration of some of the key terms or tools, such as transition and trajectory. I then discuss what metaphors and models can mean in this context. This prepares the way for the metaphor of the triple helix with its three strands. I conclude with some reflections on potential future directions for thinking and research opened up by the model.

TEMPORAL DIMENSIONS OF LIFE COURSE STUDIES

Popular accounts of the life course such as Sheehy's (1976) often use chronological markers such as decades. However, chronological age tells us only a little about where we are in our lives. It is indispensable for understanding the structure of these lives, and their dynamics, but it begs rather than answering the questions (Adam, 1995; Young & Schuller, 1988). How far are the phases and stages in our lives shaped by factors external to ourselves (see e.g., Bartley, 2012)? Why do we do things in the order that we do them (Levy & Widmer, 2013)? What changes in these sequences are occurring from one generation to the next, and why? These are the kinds of question that life course research addresses, which require us to go beyond the simplistic mapping of stages against chronological ages.

An early definition of the life course runs as follows: "those successive statuses individuals are called on to occupy in various cultures and walks of life as a result of aging." (Cain, 1964, p. 276). By "aging," Cain meant the process which begins at birth, or even before, and extends to the end of life. A period of 50 years on this is a much more extended process, and the term "aging" is itself a contested one: to many it begins only at a point well along the life course and is associated with physiological or other decline, but its starting point can equally plausibly be located much earlier (even at birth). Life course studies do not necessarily cover the entire process from birth to death—in fact they rarely do so—but their frame of reference is one which involves extended rather than episodic time and which takes a longitudinal rather than cross-sectional approach (Wadsworth & Bynner, 2011).

There are excellent overviews of the current state of thinking in life course research, which do valiant justice to its temporal multidimensionality and to the way its different components interact with each other in a constantly changing process (Heinz, Huinink, & Weymann, 2009; Mayer & Schoepflin, 1989; Settersten, 2003). A highly selective schema of the dimensions which recurs in the literature includes the following:

- *Temporal Levels*. Individual, organizational, and societal, each with its own rhythm.

- *Interdependencies*. Between the levels just described, and between past, present, and future.
- *Cohort versus Age versus Generation*. How far the changes we observe are a function of the historical group to which the person or group belongs, of the aging process, or of the relationship between different age groups.
- *(De)standardization*. Whether the timetables of individuals or groups are becoming more or less homogeneous and more or less tightly tied to social norms.

The central task is how to map individuals and populations as they age and change over time, within a context which is itself changing. There is always at least a double if not triple dynamic at work. Integrating the different perspectives and different data types is a major challenge (for one ambitious approach, see Hicks, 2012).

All of these overviews are from a social science perspective but all point, explicitly or not, to the need for inter- or multidisciplinary. Adding biological and psychological perspectives to social scientific ones multiplies the complexity and poses a major challenge to our capacity to represent the issues, visually or conceptually. I am not claiming that life course research is intrinsically more complicated than many other fields, but the plethora of dimensions means that the field struggles to find a coherent overall analytical model.

STAGES, TRANSITIONS, AND TRAJECTORIES

The familiar picture of the life course is a series of stages or statuses that occur in a linear sequence. Adolescence comes after infancy and childhood, and is succeeded by adulthood, maybe broken down into early, middle, and late adulthood, followed by old age. The number of stages identified in the literature ranges from 3 to 12 (Kohli, 1986), and is to some extent arbitrary. One highly influential example in social psychology is Erikson's stages-of-man (sic) model (Erikson, 1959). Significantly, of Erikson's eight stages young adulthood is the sixth, leaving only adulthood and maturity to cover the rest of life; increasing longevity makes this balance of stages problematic.¹

Moving from one stage to the next means effecting some kind of transition, understood as a significant shift in status, condition, or outlook (Blane, Kelly-Irving, d'Erico, Bartley, & Montgomery, 2013). Examples from the social sphere are changing occupation, getting divorced, or becoming a parent. Transitions may or may not be marked socially by a rite de passage. One fruitful area for study is the changing nature of such transitions: what

1. His widow added a ninth after his death, see Bateson (2010), p. 66.

is driving the change, how do new transitions emerge, and how long rites linger when their original rationale disappears.

Transitions are embedded within the trajectories that give them their meaning (Elder, 1985). The combination of stages and transitions makes up the trajectories of the life course. The trajectories usually discussed are the main ones of education, work, and family, which have their recognizable patterns, shaped by social institutions and practices, but in principle there is room for any number of trajectories describing the diverse life course sequences exhibited by different populations and subgroups (see e.g., <http://www.lives-nccr.ch>).

The temporal linearity of many stage models is tidy but unconvincing empirically, even when they are sophisticated and detailed in their application. People rarely pass across from one status to another in a single move, sloughing off the earlier stage completely like a snake's skin. Erikson himself argued that each stage is prefigured in all the previous ones. Clearly, there is great variation in the timings of the transitions, in the fixity of their sequencing (how often they occur in the same order), and in their duration. As we shall see, some transitions have become greatly extended as a consequence of social and economic change. And some stages recur: examples are the "boomerang" phenomenon of young adults returning to the parental home, and therefore some form of dependency, because of housing shortages or relationship problems [Office of National Statistics (ONS) 2014], or increasing divorce and repartnering, which recreate family patterns a second time round. We need also to distinguish reversible from irreversible transitions.

Chronological age is strongly implicated in all of this. It is the most natural and powerful marker when it comes to defining the endpoints of stages and mapping them against the overall life course. But chronological age is a reference point rather than itself a key to understanding life course structures and dynamics. On the one hand, chronological age provides an objective standard against which developments can be mapped; on the other hand, it obscures underlying social processes, which limit human potential. The universality of chronological age cannot disguise the variations which occur along all kinds of variables: gender, class, ethnicity, and culture, to name but the most traditional. An obvious example is the way the traditional three-stage model of education–work–retirement, still so powerful, has always ignored the patterns of women's lives and now obscures the ways in which rising levels of female employment have reshaped these patterns.

A fundamental contemporary driver behind the changing dynamics of the life course, embodied in these stages, transitions, and trajectories, is the aging of many populations (Harper, 2005). The most direct manifestation of this is the extension of life expectancy, not so much from birth as from middle and

later ages. More and more people now expect to live for two or more decades after they pass the traditional age of 60 or 65. The fastest growing age group in the world is the oldest-old, those aged 80 years or older. The UN figures show that by 2050, one-fifth of older persons will be 80 years or older.

These demographic trends substantially affect the categories and labels we use to describe and analyze the life course. The dramatic change in the shape of the population means that the relationship between generations is changing, within families and populations as a whole. It poses substantial challenges to our image of the life course. Do we add on additional stages to our repertoire in order to cater for the additional numbers of "old" people? And/or do we stretch duration of the existing stages in order to fill the extended overall duration? Even more importantly, how does the prolongation of the average life course duration affect the nature and meaning of earlier stages? These questions are part of the life course agenda.

MODELS AND METAPHORS: THE TRIPLE HELIX

In her fascinating exploration of models and metaphors in genetics, Evelyn Fox Keller (2002) reflects on how these terms are used. A model, she says, "is not expected to serve an explanatory function in itself, nor is it a simplified representation of a more complex phenomenon ... Rather its primary function is to provide simply a stable target of explanation." (p. 115). In other words, a model helps us to identify what it is that requires exploration and explanation. As for metaphor, it is more than a "provisionally useful heuristic to be dispensed with as soon as possible." On the contrary, metaphorical language allows "the productive use of the cognitive tensions generated by multiple meanings" (p. 117).

How can we "model" the life course to better reflect its uncertainties and dynamics, and the "multiple meanings" that Fox Keller refers to? What are the most appropriate metaphors that add insights and generate fresh angles of understanding? In the past, the commonest conventional images of the life course that go beyond simple linearity have been the circular wheel and the staircase, rising and then falling ("stufenalter", see Cole, 1993). The wheel dominated in the era when life was seen as a recurrent circular process, with individual souls returning to their origins. It reflected, as images do, the dominant ideology of the times, a closed social system destined to repeat itself through the ages. Over time this was displaced by the bridge or staircase, with men and women ascending into maturity and then declining, often in an unrealistically symmetrical image. Such images corresponded more or less loosely with social and psychological models of life course stages, almost always presented in end-on linear fashion. However, they are static, rigid, and not very generative of Keller's fruitful cognitive tensions.

A nice example of metaphorical thinking in relation to the life course is Mary Catherine Bateson's *Composing a Life* (Bateson, 1990). She criticizes much research for focusing only on single stages, looks for both continuities and discontinuities in women's lives, and gives prominence to contingency, fluidity, and improvisation as characteristics of women's lives. She also emphasizes the capacity for agency. This leads her to the artistic metaphor of composition, a piecing together of lives from disparate elements, in a continually modifying pattern—"ongoing improvisations," as she terms the process (ibid, p. 241). Two decades later, Bateson (2010) revisited the model, in *Composing a Further Life*, adding in a "second adulthood" stage as a response to increased longevity.

To address some of the limitations of linearity I put forward the image of a triple helix. This is a simple analogical extension of the famous DNA double helix. The three strands that twist round each other are the biological, the psychological, and the social. These could of course be broken down into many more substrands. The image is not more comprehensive than others. However, it allows a more flexible way of conceiving of the diverse dynamics of the life course, and of the changes that occur in its structure

The development of every individual can be seen as a function of the changing relationship between these three strands of the helix, which revolve round each other, not symmetrically but in a complex and varied pattern. On this basis, ages and stages are to be understood by reference to just one of the strands, but to the way they interact with each other. We can illustrate this very simply by reference to two major transitions: entry into adulthood and exit from employment.

Biologically, people become adult earlier now than they used to, as the age of puberty declines (though more slowly than it did in early part of the twentieth century). However, in many countries girls and boys attain the social status of adults at an increasingly advanced age, whether we define this by reference to economic independence, getting a "proper" job, establishing their own household, or a mixture of these and other indicators. Decades ago, there was a closer chronological coincidence between the two transitions, as people moved into becoming young women and men physically at roughly the same age as they got a job. Today, there is commonly a gap of 10–15 years or more. How far this causes them psychological discomfort, if at all, is a matter for debate (see e.g., Côté, 2000; Settersten & Ray, 2010). Is the result disoriented limbo or graduated growth? The answer will vary for different groups, and I am not arguing that a close tie is necessarily the optimal circumstance. However, there is a mounting evidence of psychological ill-health in younger generations for whom the transition to social as well as biological adulthood is very uncertain. Hence, the growing disjuncture between passages on the two strands has probable

consequences for the third. This calls into question some of our social institutions and practices.

Similar processes are at work at the other end of working lives. Biologically, people who now attain the chronological age of pension entitlement are on average “younger” than their preceding generation: fitter and with a far longer life expectancy. Yet in the latter part of the twentieth century, there was a strong trend toward earlier retirement, at least on the part of men. When Bismarck introduced the pension in the 1880s, it was linked quite directly to life expectancy, with most pensioners living only a short while after finishing work. There was therefore quite a close association between people’s physical condition, their position in relation to the labor market, and the formal recognition of this through the state pension age. The association disguised big variations in personal circumstances, notably by gender and social class, but it was one which served to define the transition into “retirement” in a way which was broadly understood. Now, however, the divergence between biological and socioeconomic statuses is even more pronounced. Moreover, retirement is often an extended process not a singular transition point, and the categories of “retired” and “pensioner” are increasingly inadequate as social labels.

There been some reversal of this divergence, with countries moving to extend working lives and make pension ages later—an important reminder that shifts in the nature of life course transitions can be reversed. Yet these trends have not remotely caught up with the demographic tide. The altered relationship between physical health and life expectancy on the one hand and socioeconomic status on the other has yet to produce a set of social practices which function well as markers in this part of the life course.

There was nothing magical about the age selected for pensions, which then became “retirement age.” It was based on rough actuarial calculation, and therefore at least had a transparent rationale. It would be interesting to know how this changed people’s perceptions of their own status, or that of the age group generally. Did they feel older? More securely defined as a category? As a consequence, more or less comfortable with their status? Physical and psychological states change in response to social labeling, so there must have been some effects. As pension ages shift and retirement as a clearly defined passage crumbles away, equivalent changes will be happening.

I have said earlier that there is no *a priori* optimal alignment between one strand and another. Yet the triple helix model generates questions about the ways in which our current arrangements—institutions, norms, and traditions—match up to what we might consider good practice. If people are living healthier, as well as longer, lives, this does not automatically mean that they should be pressed to work longer in conventional employment. If people become physically mature earlier, this does not mean they should

be treated as ready for the social and psychological demands of adulthood. However, it does mean that we should be exploring how the new life course stage, or stages, that this opens up are to be defined, and what the social, fiscal, and educational consequences might be.

Differentiating the experiences of diverse populations within life course stages is crucial. Social divisions are huge and complex in relation to both these transitions. In the United Kingdom, there is now almost a 50/50 division between young people who go on to some form of higher education and those who do not. The “university experience” has commonly been defined as something that enabled young people to mature, and not just intellectually. The question of why some young people are given this opportunity but not others was never treated as different from the question of who was enabled or selected to go to university. The issue has now acquired real urgency because of the proven scarring effects of youth unemployment (Gregg & Tominey, 2005), and the increasing relative disadvantage of the 50% who do not go to higher education.

For older people, a common pension age gives a false sense of social solidarity. Pensions, and especially occupational pensions, have always meant a transfer from poor people to better off people, for the simple reason that the latter live longer, and so are still around to collect their payments for years after their poorer brethren have died. An interesting current debate in France is over whether people who have done physically demanding jobs should be allowed to take their pension earlier, establishing a link between the biological and the social. This is more rational, and in principle fairer, than a chronologically homogeneous retirement age—even though it poses problems of selection and calculation.

The model of the triple helix opens up space for new analytical concepts to emerge. How do we define and assess the tensions between movements along the strands in different directions? How do we incorporate our increased capacity to identify health patterns in different groups, such as vulnerability to different forms of illness, into assessments about working capabilities over the life course? How do we plan for different trajectories of decline? And, with particular resonance, how do we manage what is now often a prolonged process of dying, as opposed to the event of death?

Of course each of the three strands could be disaggregated into a set of “thinner” substrands. The biological strand could be untwined or decomposed, for instance, to show different related patterns of cellular growth and decay. More or less discrete lines of psychological maturation can be mapped out, varying in their salience at different points in the life course. Similarly, there is a wide range of changing social statuses, each of which could be separately tracked: employment careers, family position, and so on.

In other words, the triple helix could easily become the sextuple helix, or the octuple—or almost any number, given the capacity of disciplines to break themselves down. I am concerned here only to establish the principle that it is the dynamic changing relationship between the strands which should be brought into focus in order to give us some grasp of the overall sense of life course development.

I said earlier that the linear approach to life course analysis does not allow for repetition, for the possibility that certain stages appear to recur. Of course they do not recur in the full literal sense and never in a chronological sense. No person steps twice in the same river. Yet it seems to me that our life course models should allow at least for partial repetition in the sense of a bending back of one of the strands. Thus, a second marriage is not a repeat of the first, but we need to understand in what sense the remarrier's second social transition is similar to the first in its relationship to the other strands, or how does becoming again a full-time student in middle age both resemble and differ from being a student as an adolescent or young adult? These examples are very simple, almost to the point of triviality; however, unless we can grasp them as repetitions, and not merely as another "stage" with the same label as the previous one but entirely different content, we will have only a partial understanding of them. And the key to understanding these resemblances and differences is relating them as statuses to the other strands.

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