Conceptualizing Turning Points in Socio-economic Trajectories – A multi-dimensional approach

Nicolas Legewie[1] and Ingrid Tucci[2]

Abstract

The concept of turning points is one of the most important concepts in life course studies. While many researchers agree that turning points comprise profound changes in individuals' life courses, conceptualizations of the phenomenon diverge consistently between studies. Three existing perspectives (what we call evaluative, formal, and case-holistic) place different emphases in their understanding of turning points. They have complementary strengths and weaknesses and lead to limited comparability of empirical turning point analyses. Based on a mixed-methods research project, this paper uses case analyses and survey information from the Socio-Economic Panel (SOEP) to propose the combination of the three perspectives existing in the literature into a refined conceptualization of turning points. This contribution thereby provides an analytic tool that helps increasing comparability between analyses and thus contributes to continuous progress in our understanding of turning points. Specifically, we suggest turning points should be conceptualized along three dimensions: change in social status trajectory, subjective relevance, and spillover between life domains. We discuss these dimensions, possible indicators, and challenges of aggregation. Moreover, we discuss distinctiveness and adaptability of the concept.

Keywords: Turning points, life course; labor market; concept development; mixed methods

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INTRODUCTION

Turning points describe fundamental shifts in the dynamic of life courses and represent a very complex social phenomenon. For life course research, turning points are crucial as a means to

understand life course dynamics (i.e., stability and change in trajectories). Since the 1990s, many scholars have contributed theoretically and empirically to understanding turning points in life courses. Theoretical works provide insights on what characterizes and drives them (Abbott 1997; Bessin, Bidart, and Grossetti 2009; Bidart, Longo, and Mendez 2013; Elder 1974; Hareven and Masaoka 1988). The existing empirical sociological literature on turning points focuses on such diverse topics as criminal behavior (Laub and Sampson 1993; Uggen 2000; Rumbaut 2005; Uggen and Massoglia 2003), young adults trajectories (Bidart 2006; Schoon 2006; Stone, Berrington, and Falkingham 2014; Wethington, Kessler, and Pixley 2004), or labor market trajectories (Denave 2006; Dupray and Epiphane 2014; Fournier, Zimmermann, and Gauthier 2011).

Despite being a key concept in life course studies and the focus of numerous studies, turning points shows a great deal of conceptual ambiguity and disagreement. Currently, conceptualizations of turning points take either an evaluative, formal, or case-holistic perspective, which have complementary strengths and weaknesses. The evaluative approach (e.g., Elder, Gimbel, and Ivie 1991; Hareven and Masaoka 1988) stresses the importance of subjective experiences, but leads to an idiosyncratic understanding of turning points. The formal approach (e.g., Abbott 1997, 2001) takes objective measures into account, but largely misses the subjective experiences of turning points. The case-holistic approach (e.g., Bidart 2006; Bidart and Brochier 2010; Laub and Sampson 1993) offers a number of substantive dimensions that capture the processual complexity of turning points, but the approach sometimes conflates turning points and other impactful life course processes. Because of these three parallel perspectives, empirical analyses of turning points are difficult to compare, which makes it more difficult for researchers to build on prior theoretical and empirical contributions. Moreover, empirical analyses often only address one part of the elements that make up turning point. The question, then, is how to integrate and refine existing conceptualizations of turning points in order to capture important

facets of this complex social process, facilitate a more systematic analysis and comparisons between studies, and, thereby, contribute to continuous progress in our understanding of the phenomenon.

In this paper, we employ a mixed-methods approach to address this issue and refine the concept. We use data from a mixed-methods research project, "The Children of Immigrants Coming of Age"[1], which combines data from the German Socio-economic Panel (SOEP; Goebel et al. 2018) with qualitative in-depth interviews conducted with 25 long-term respondents to the panel survey. With the life course perspective as a platform (e.g., Elder 1985; Elder, Kirkpatrick Johnson, and Crosnoe 2003; Elder and Rockwell 1979; Mayer 2004), we use our mixed-methods data as sources of dense information on the sequences and events that constitute life courses. We conduct in-depth case analyses with the goal of refining the conceptualization of turning points in labor market trajectories through these analyses.

Based on a synthesis between our analysis and the existing literature, we suggest conceptualizing turning points along three dimensions: change in social status trajectory, subjective relevance, and spillover between life domains. We discuss these dimensions, possible indicators, and challenges of aggregation. Moreover, we discuss distinctiveness and adaptability of the proposed concept. By combining the three perspectives into a refined conceptualization of turning points, we provide an analytic tool that helps increasing comparability between analyses and thereby aims to contribute to a multidimensional understanding of turning points.

The paper is structured as follows: in the first section, we situate turning points within the life course literature, discuss three conceptual perspectives on turning points, and argue for combining them to refine existing concepts. In the second section, we outline our data and

[1] The project was founded by the German Research Foundation (DFG), Reference TU325/2-1 and GR3402/4-1, (2014-2017).

analytic strategy. In the third section, we present a refined conceptualization of turning points based on in-depth case analyses. In the fourth section, we discuss possible indicators and operationalizations, and reflect on challenges in aggregating from indicators to dimensions and, further, to the presence or absence of a turning point. In the fifth section, we reflect on concept distinctiveness (i.e., the possibility offered by the concept to differentiate between turning points and other life course processes, such as transitions), as well as its adaptability (i.e., the possibility to adapt the concept to a different subject field, such as religious belief). The paper concludes with an outlook on future avenues of research.

TURNING POINTS IN LIFE COURSE STUDIES

Turning points are a specific type of process that may occur in a person's life course. Together with other concepts such as transitions, changes, sequences, events, or crises, they help capturing, analyzing, and representing life course dynamics (Wingens et al. 2011). Bidart, Longo, and Mendez (2013) take this perspective further and argue that turning points are an integral part of understanding social processes more generally.[2] In the context of life course studies, turning points are especially relevant because they mark a radical change in a person's life.

Life course scholars have reflected extensively on how to capture turning points, producing some common ground, as well as diverging conceptualizations (Abbott 1997; Bessin et al. 2009; Elder et al. 1991; Hareven and Masaoka 1988; Laub and Sampson 1993). We first give a brief overview of the common ground, and then introduce three perspectives on turning points. In the last part of this section, we argue the three perspectives have complementary strengths and

[2] They see processes as comprised of four pillars: context and ingredients, sequences, driving forces, and turning points (Bidart, Longo, and Mendez 2013:743).

weaknesses and should be integrated to capture more systematically the different dimensions of this social process and to increase comparability of findings on turning points.

Core characteristics of turning points

Most scholars agree that turning points imply a radical or fundamental change of direction in a life course trajectory (e.g., Abbott 1997; Sampson and Laub 2005:16) and connect two distinct and stable phases, such as a phase of constant employment and a phase of long-term unemployment. In a similar vein, Grossetti (2004, 2006, 2009), as well as Bidart and colleagues (Bessin et al. 2009), underline radicality of change as a basic component for turning points. Moreover, turning points are almost universally seen as a process over time, despite the somewhat misguiding term "turning *point*" (Abbott 1997; Bidart 2018; Carlsson 2012; Schoon 2006). As a consequence, turning points can only be identified in hindsight, once enough time has passed to assess whether a new trajectory has begun (Abbott 1997: 95).

These characteristics make turning points distinct from other life course processes such as transitions (Bessin et al. 2009). Transitions are changes during the life course that include a status passage (i.e., a change of social role and attached social norms and expectations; see Wingens et al. 2011:13) and are in some way institutionalized or subject to normative expectations (Kohli 2007). For instance, leaving the school system to enter university or the labor market is a transition because this kind of change belongs to the standard biography and some form of status passage inevitably occurs after finishing one's educational degree. In contrast, dropping out of school or university without a degree is a non-institutionalized change that may (but does not necessarily) result in a drastic re-direction of a person's life course. Of course, changes and transitions may play an important role during turning points, either as drivers or consequences and hence may form part of a turning point, but the two are not congruent or form a subset

relation, and turning points comprise a discrete and relevant process in their own right (Elder 1985).

Beyond relative agreement on these core characteristics, scholars diverge in their definition and operationalization of turning points. In broad terms, we can distinguish evaluative, formal, and case-holistic perspectives. As we argue in the subsequent section, these perspectives are not mutually exclusive and can be fruitfully combined to capture turning points as complex social processes in a more complete way (for a similar approach, see Mendez 2010; Reimer 2014).

Evaluative perspectives

Evaluative perspectives have prominence in constructivist epistemological approaches that use predominantly qualitative data (sometimes called biography research, as a contrast to the life course perspective), but also in some studies that use survey data. In this perspective, what comprises a turning point depends on a respondent's evaluation. For instance, Hareven and Masaoka (1988) use in-depth interviews to study turning points as their respondents' "subjective assessments of continuities and discontinuities over their lives" (Hareven and Masaoka 1988:271). According to Elder and colleagues, a process can be identified as a turning point if the change induced for the individual is important enough. In their study on military service and war, Elder, Gimbel & Ivie (1991) ask their respondents to list five turning points in their life: among others, education, marriage and war were frequently mentioned.

The evaluative approach stresses the individual's subjective experience as an important marker for turning points. At least part of what characterizes turning points is the strong impact they have on the person's life and her or his experience thereof. If one understands life courses as purely retrospective narrative constructions (i.e., biographies; e.g., Schütze 1983), this evaluative conception of turning points suffices. However, reducing turning points to subjective importance

means that what comprises a turning point will vary from respondent to respondent. The wide consensus on the discussed core characteristics suggests that turning points share certain objective elements beyond individual relevance that allow identifying them systematically across cases. If one assumes that turning points can be, at least in part, characterized by certain objective characteristics, the evaluative perspective might limit researchers to an idiosyncratic, case-by-case definition.

Formal perspectives

For Abbott, turning points redirect processes organized in trajectories (Abbott 1997:101). In his sequential approach, turning points can be defined as minima or maxima in mathematical functions (Abbott 1997) and may thus be identified by reconstructing an individual's life course using a set of objective dimensions relevant to the research question (e.g., labor income for turning points in social status trajectories). An important requirement is to have observations separated in time to evaluate the ordering of sequences and a possible sudden change in direction. Abbott's formal criteria, based on what he calls "narrative positivism," do not necessarily require an interpretation from individuals or researchers (Abbott 2001:259).

This definition stresses the objective dimension of turning point (see also Reimer 2014). However, by focusing on minima and maxima, the formal approach risks reducing turning points to a one-dimensional pattern, assumes a rather straightforward inner dynamic, and overshadows the subjective dimension of turning points (Laub and Sampson 1993:318). Also, simple adherence to maximum values may be deceptive; e.g., what appears like a maximum could in fact be part of a cyclical function (e.g., sinus) that points to a re-occurring pattern in a trajectory, rather than a fundamental shift in direction. Finally, not all fundamental changes can be captured by minima or maxima in mathematical functions; profound changes in occupation during labor market

trajectories are an example in point (see below; also see Dupray and Epiphane (2014)). Thus, a strictly formal definition risks overlooking important aspects of turning points and their impact on different life domains.

Case-holistic perspectives

A third perspective takes a case-holistic approach to turning points. Laub & Sampson's (1993) study desistance from crime as turning points in criminal careers. Their work laid the groundwork for this perspective and provided important methodological directions. In this perspective, turning points are defined by a set of substantive dimensions that include formal as well as process-centered criteria (Carlsson 2012; Laub and Sampson 1993; Wingens et al. 2011). Turning points comprise interplay between interactions of individual behaviors and orientations, social networks, and institutional arrangements (Laub & Sampson 1993: 312).

In French life course sociology, the concept of turning point ("bifurcations") has received special attention from a case-holistic perspective (Bessin et al. 2010; for a definition, see Bidart et al. 2012: 749). The approach led mainly to qualitative studies on the topic (see, for example, Bidart 2006; Bidart and Brochier 2010), which highlight important levers of turning points such as the role played by the interactions between different life domains, decision making processes, events, and temporality. Dupray and Epiphane (2014) use this temporal approach in an analysis of data from the French panel survey "Enquête Génération 98." They employ panel data for in-depth case analyses and select several objective indicators to identify turning points in the form of a radical and unforeseeable occupational reorientation during respondents' early labor market trajectories. While the authors test the effect of different factors (e.g., education, branch) on the probability of experiencing a turning point of this kind, they do not consider the subjective meaning or importance given to those changes.

The case-holistic approach is especially attuned to the processual complexity of turning points, such as their driving forces of changes (Bidart and Brochier 2010: 171). But, due to the focus on important life course processes and their driving forces, the case-holistic perspective sometimes leads scholars to conflate turning points and other types of impactful life course processes, such as events and transitions (Bidart 2006, 2013:260; O'Carroll and Gray 2010:8). Moreover, scholars often focus on the inner dynamics of turning points rather than a conceptualization that would facilitate comparability of findings (e.g., Carlsson 2012; O'Carroll and Gray 2010).

Toward an integrated approach to identifying turning points

The three existing perspectives have complementary strengths and weaknesses when it comes to conceptualizing and identifying turning points. The evaluative approach stresses the importance of subjective experiences, but leads to an idiosyncratic understanding of turning points. Individuals will likely perceive very different processes as turning points, some of which may well seem as processes of minor importance to an outsider. While this enables researchers to compare what individuals in a study experienced or constructed as a turning point, it makes much less sense to compare the inner dynamics of such turning points or compare findings across studies regarding, say, the driving forces of turning points scholars identify in their research.

The formal approach focuses on objective measures, but misses the subjective experiences of turning points. This may lead to false positives from a conceptual perspective; changes in a trajectory that may meet the formal criterion for a turning point, but did not mark a profound change in that person's trajectory. Moreover, formal perspectives have difficulties accommodating non-hierarchical, non-continuous changes in life course trajectories.

The case-holistic approach focuses on processual complexities of turning points, but the approach sometimes conflates turning points and other impactful life course processes, and sometimes lacks clear conceptualization of turning points.

Taken together, the three perspectives that have been developed in the literature provide crucial insights to our understanding of turning points, but they also comprise a roadblock to systematic identification and more continuous development of our understanding of the phenomenon. By using or at least referring to a conceptualization that captures the different relevant elements and dimensions of the phenomenon, studies could better compare empirical findings and facilitate a more cohesive research program on turning points in life course trajectories.

The main goal of this paper is to combine these perspectives and refine existing conceptualizations of turning points. With this, we hope to facilitate analyses and comparisons between studies of the phenomenon in order to foster incremental progress in our understanding and analysis of turning points. To accomplish our goal, we employ in-depth mixed-methods case analyses of case-based longitudinal survey data and retrospective in-depth interview data. The resulting integrated concept can be used to identify turning points in qualitative, quantitative, or mixed-methods studies of life course trajectories.

DATA AND ANALYTIC STRATEGY

This paper draws on data from a mixed-methods research project on social status trajectories of immigrants' descendants in Germany. In this project, we combined data from the German Socio-Economic Panel (SOEP) with 26 in-depth interviews of SOEP respondents. In the following sections, we briefly present the data collection process and describe how we employed an inductive approach to combine and refine existing concepts of turning points.

Data

The SOEP is a representative panel study of private households and persons in Germany (Wagner, Frick, and Schupp 2007). It was established in 1984 and is conducted yearly. In 2015, over 15,000 households and 27,000 individuals over 16 years of age were surveyed. The SOEP offers a range of interesting items to study life courses; not only regarding social status trajectories, but also family formation, social relations, personality traits, mental and physical health, as well as subjective well-being.

Data collection followed a nested sequential mixed-methods design (Ivankova, Creswell, and Stick 2006). After a quantitative analysis of the education and labor market trajectories of young adults in Germany (Groh-Samberg et al. 2012; Keller et al. 2012), the sampling plan for the qualitative interviews aimed to ensure variation in labor market entries. Additional sampling criteria included gender, geographic location, parents' country of origin, and current socio-economic status (Legewie and Tucci 2016).[3] The in-depth interviews focused on social status trajectories (especially key moments and phases such as transitions), but also on family and other social relations, and identity constructions and experiences of discrimination. The themes were mostly tackled without specific order and instead allowed the respondents their own rhythm and foci of attention (e.g., Mey and Mruck 2010).

It is worth noting that respondents were not explicitly asked whether they had experienced any turning points. This kind of practice (employed by, e.g., Elder et al. 1991; Sampson and Laub 2005) primes responses and therefore compromises data validity (Carlsson 2012: 2). Instead, respondents were first asked to tell their life story and, after the initial response, answer follow-

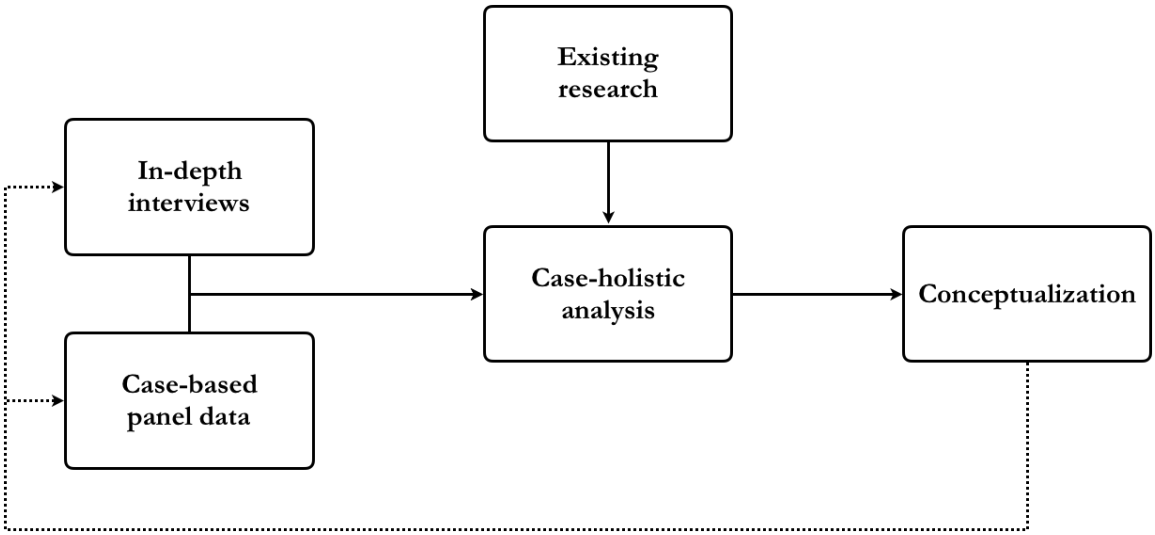
[3] The interviews were conducted at a location of the respondents' choice. They were recorded digitally and lasted between 88 and 192 minutes (average: 139 minutes).

up questions for clarification and elaboration. Second, respondents were asked to identify important phases during their life. This could be any transition, change, or other phases the respondents deemed important. For each of the phases thus identified, as well as theoretically relevant transitions such as labor market entry or family formation, a list of topics was covered by asking follow-up questions, if necessary. The follow-up questions aimed to capture aspects such as respondents' goal orientations, personal network, or social context information during the phase in question (for a full list, see Legewie and Tucci 2016, Appendix 2).

Analytic strategy

The interviews were transcribed and coded using the qualitative data analysis software package MaxQDA. As 25 of the 26 respondents gave informed consent to link their qualitative interviews with the standardized panel survey data, we combined the qualitative interviews with data from previous waves of the panel survey (e.g., yearly data on occupational status, household income, satisfaction in different life domains, events, or monthly activity calendar) to gain additional information on each case. We refined the concept of turning point in an iterative process of within and cross-case analysis, consultation of literature, and theoretical reflection. Figure 1 illustrates this research strategy.

Figure 1: Analytic strategy



In our analysis, we used a) existing conceptualizations as a starting point, b) Strauss's variant of grounded theory as an analytic heuristic (e.g., Strauss and Corbin 1998), and c) Goertz's (2006) notion of multi-level concepts as a target template for a transparent concept structure. Grounded theory in Strauss's variant can be understood as a toolkit for developing concepts and theory from qualitative data. Central to our analytic approach in this paper are the method of constant comparison and a step-wise coding process. The former describes a basic approach to comparing constantly pieces of data within and across cases to look for similarities, differences, and important insights (Strauss and Corbin 1998:73–85). The latter suggests developing concepts by first coding data in great detail, then order codes into broader themes, and finally into abstract categories (Strauss and Corbin 1998:101–62). Because our analysis aimed to refine existing concepts drawn from the literature, we focused on the second and third steps of coding.

During this coding process, we used Goertz's suggestion to devise concepts in multiple levels in order to break down abstract notions into more palpable dimensions. One or more indicators make dimensions directly observable in the data (Goertz 2006:240f; also see Coppedge 1999 for a similar approach). This notion of multi-level concepts meshes well with the coding steps

advocated by grounded theory. It should be noted that concepts do not necessarily need multiple dimensions and indicators; some concepts can be captured with a much simpler concept structure. Researchers should always aim for as little detail as possible, but as much detail as necessary to fully capture the concept at hand in a concise but meaningful way.

A further useful aspect of using Goertz's notion of multi-level concepts as a target template is its focus on the connections between concept levels, such as essential or substitutable. Essential means that all dimensions or indicators must be present for the higher level to be present; substitutable means that only one of the dimensions or indicators has to be present (see Goertz and Mahoney 2005 for a detailed description and further types of connections). Defining connections within the concept structure in this way yields even more transparent and well-specified concepts.

The mix of data types proved instrumental for concept development, because it allowed different perspectives on relevant concept dimensions. For instance, regarding subjective relevance (see below for a description), we were able to draw on verbal statements describing a respondent's life situation, retrospective assessments of life satisfaction produced at the end of the in-depth interviews, as well as yearly data from the panel data measuring life and domain-specific satisfaction.[4] Moreover, panel data can be seen as a rich pool of information on a variety of topics that can be used to produce detailed life course reconstructions (Elliott 2008; Singer et al. 1998). In this sense, the 25 respondents' panel data was a valuable and rich source of complementary information, especially since some topics may not have been touched in a particular interview, but turned out to be relevant during the case analysis.

[4] Life satisfaction and domain-specific satisfaction are measured on a 0-10 scale.

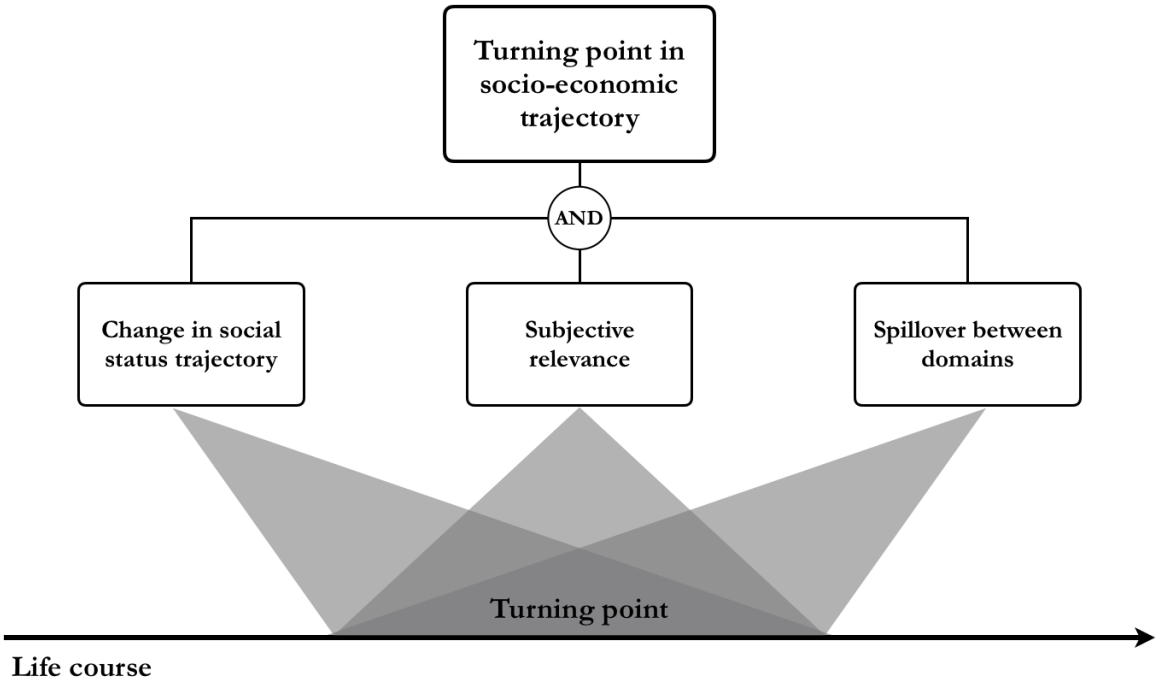
Based on this integration of the two types of data, we produced a series of synthesizing documents, including extended analytic case memos and comparative tables that bring together relevant information (e.g., on how transitions unfolded in each case). These documents informed systematic cross-case comparisons of life course dynamics in general and turning points in particular in the cases in our data set.

In the following sections, we present the concept and its dimensions, discuss possible indicators of these dimensions and options for operationalization, and demonstrate the concept's distinctiveness and adaptability.

TURNING POINTS IN SOCIO-ECONOMIC TRAJECTORIES – AN INTEGRATED CONCEPT

Based on our in-depth case analyses and the existing literature, we suggest conceptualizing turning points in socio-economic trajectories using three essential dimensions: change in social status trajectory, subjective relevance, and spillover between domains. Since each dimension comprises an essential part of the concept, all three have to be present within a certain timespan for a life course process to qualify as a turning point (see figure 2).

Figure 2: Dimensions of turning points over time



"Change in social status trajectory" captures the core idea of turning points as phases in which a life course trajectory in the domain of the labor market fundamentally shifts its course. Following the formal perspective, possible indicators include drastic and lasting changes in labor income or occupation. "Subjective relevance" adds the evaluative perspective by capturing whether individuals ascribe importance to changes of trajectory. Depending on the data available, indicators can include direct measures that ask about the individual's perceived importance of the change, or indirect measures such as changes in satisfaction and well-being. "Spillover between domains" captures the notion that there is a set of parallel processes in various life domains that lead to up to, accompany, or follow the focal change in socio-economic trajectory (Bidart 2013; Carlsson 2012; Grossetti 2006; Laub and Sampson 1993). Possible indicators include direct measures obtained through reconstructions of an individual's life course and possible events and changes in different domains, and indirect measures such as density of life events and minor changes of the individual and her or his household. In our qualitative data set of 25 respondents,

eight showed a turning point according to the proposed conceptualization. We reflect on each dimension and avenues for operationalization in the next section.

To illustrate the refined concept of turning points, we use the case of Carlo, who will also serve as the focal illustrative example throughout the rest of this paper. Figure 3 shows a visual representation of Carlo's socio-economic trajectory between the ages of 25 and 39. It shows Carlo's change of occupation, his labor market status over time, transitions and life changes that occur over that time period, as well as Carlo's income and satisfaction with work as an indicator of subjective relevance.

Carlo is the son of Italian and German parents who lives in a city in the Western part of Germany. Carlo is in his late thirties at the time of the interview. His labor market trajectory is marked by a fundamental mid-career change: After about ten years in the labor market, Carlo left his job as a dental technician to start working as a childcare assistant for special-needs students. He had been unhappy with his job's working hours for a while but had never seriously considered leaving and thinks he "*might very well have remained stuck in that line of work.*" The owner's plans to move the company to a different town was the linchpin for Carlo to not only leave the company, but his occupation. "*I liked it [at the old job]. I think, despite all these long working hours and the nagging, and the stress, I would have stayed. So that [the company moving] … gave me the last push.*"

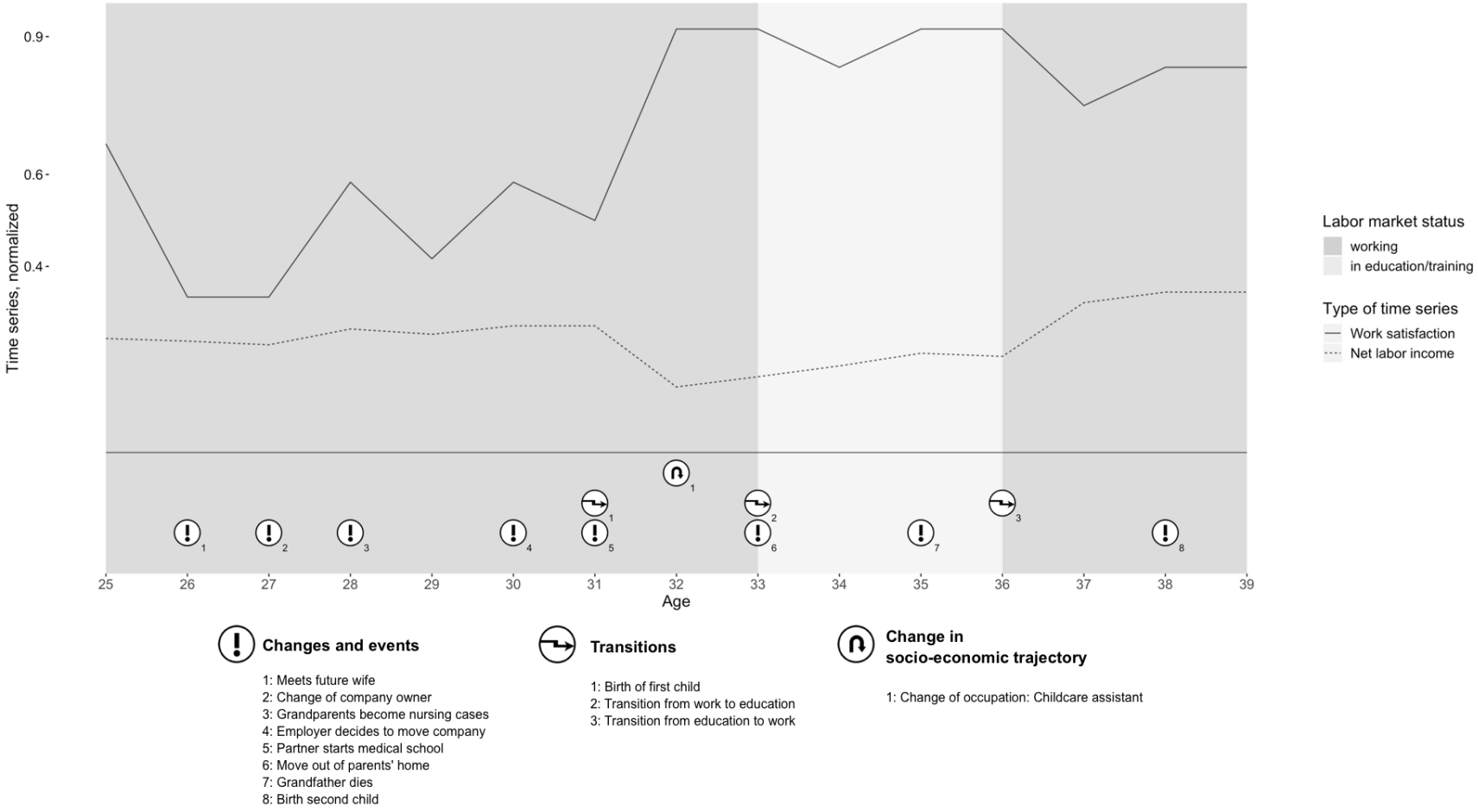
At first, Carlo planned his new job in the education sector to be only temporary; he was going to look for a new job as a dental technician while working as a teacher: "*I thought, ok, I'll do it, because I was a little fed up with being a dental tech. And it was, as I said, I planned it as a timeout, I only wanted to do one year, I only had a contract for a year [at the school]. … So I thought I'd start looking for a job as a dental tech in May or something.*" But contrary to his initial plan, Carlo eventually decided to complete a two-year vocational training, which he finished successfully to become a trained special-needs educator. This job change not only entailed entering an entirely new occupation,

Carlo also accepted a substantial pay-cut in the course of his transition and his income caught up to about the pre-change level only after he completed the vocational training in his new occupation.

In addition to being a fundamental and lasting change in socio-economic trajectory, the change of occupation also holds great subjective relevance for Carlo. In contrast to his dissatisfaction prior to his change, he describes his new situation as "*one of the best periods of my life so far*." In addition, there is considerable spillover between life domains during this phase in Carlo's life. While Carlo is dissatisfied with his old job, ponders changing occupation, and eventually takes that leap, he also meets his future wife, his grandparents become nursing cases, his first child is born, and his partner starts medical school, among other changes and transitions.

There are a number of other examples of turning points in our sample of in-depth interviews. Some show a similar process as Carlo, with a change of occupation after long-term tenure in an occupation. Others show processes of falling out of the primary labor market, e.g., after health problems or losing a job; a long period of steady employment is followed by a long period of unemployment and temporary jobs. Yet others show an extended period of low-paid temporary jobs, followed by a permanent position and substantial increase in income. What connects all these cases and variants is the combination of a trajectory change with subjective relevance and spillover between life domains. After introducing this concept structure, we discuss potential indicators and operationalizations in the next section.

Figure 3: Visualization of turning point (Carlo)



IDENTIFYING TURNING POINTS: REFLECTIONS ON INDICATORS

Defining concrete indicators that connect abstract concepts with the data is crucial in quantitative as well as qualitative analyses of turning points. In the following section, we discuss possible indicators for the three dimensions of turning points, reflect on issues in operationalizing time and change, and discuss issues in aggregating from indicators and dimensions to the presence or absence of turning points.

Change in social status trajectory

In defining indicators for the dimension "change in social status trajectory," key questions are what indicators to include, and how to capture the notion of turning points as profound and lasting changes. *Profound* means that a socio-economic trajectory changes its course in a fundamental, drastic way (Dupray and Epiphane 2014). *Lasting* means that the change is not temporary but permanent or at least relatively durable (e.g., Laub and Sampson 1993:309), going back to the notion that turning points connect two stable trajectories (Abbott 1997).

Changes in social status trajectory can be operationalized using indicators such as income, occupation, educational track, or employment status.[5] For the sake of brevity, we will limit our discussion to two key aspects: change in income and occupation.

[5] Educational track refers to dropping out of an educational track without a degree; change in employment status refers to gaining a permanent position after an extended period of unemployment or temporary jobs, or sliding into unemployment or temporary work after holding a permanent position for an extended period of time.

Change in income

Change in income makes sense as an indicator for change in socio-economic trajectory because it represents a key metric for assessing a person's socio-economic status, and it deeply affects a person's well-being (Deaton 2008; Lucas and Schimmack 2009). Individuals, too, often give high importance to their income. In our in-depth interviews, what a job paid was a frequent point of discussion, and our respondents often used income from a given job to explain why they were satisfied or dissatisfied with that job or their life in general.

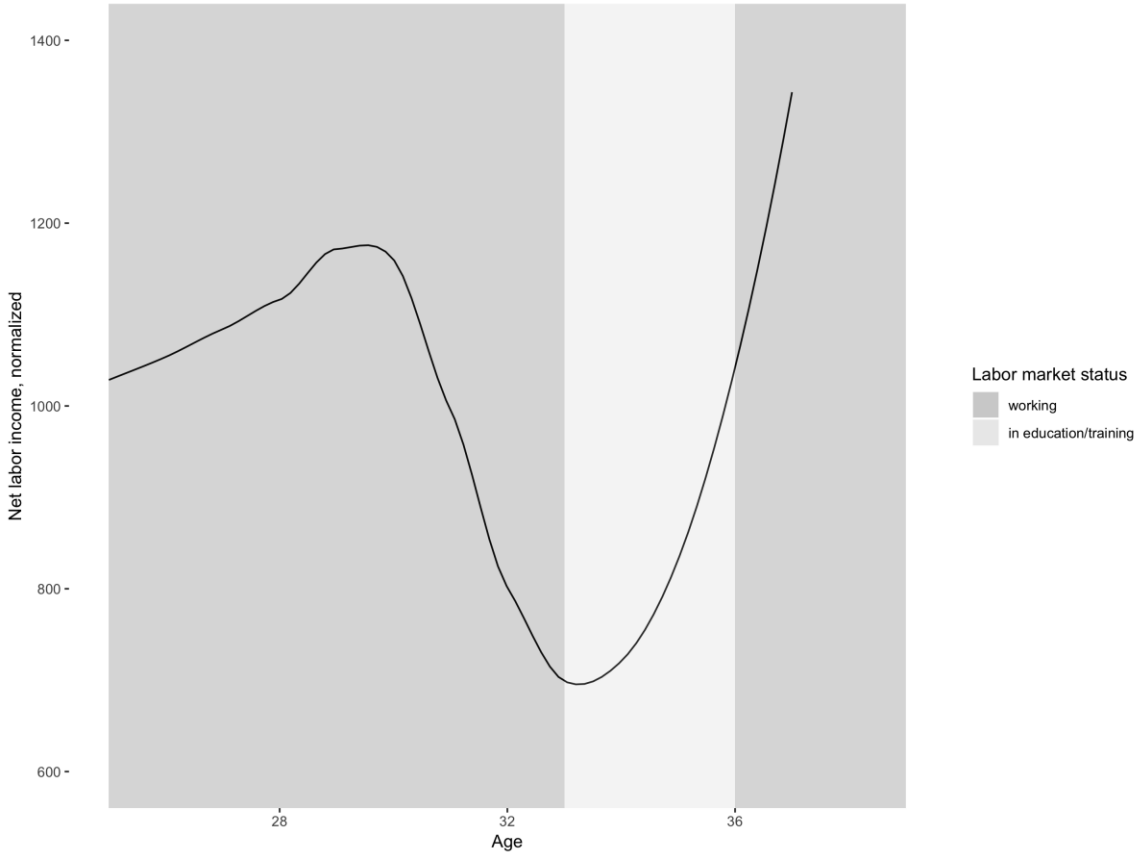
There are various options for using income measures as an indicator. For instance, net labor income allows assessing a person's individual income situation, while disposable household income assesses how much income a household has from any source, taking into account how many members there are in a household. Since both options have their merits, the choice depends on the researcher's specific interest; net labor income gives a better picture of individuals' trajectories, while disposable household income better captures changes in general economic well-being.

Lasting change means that a change is not short-lived (e.g., a short period of unemployment). This can be operationalized by looking at income over time and scrutinizing the period before and after a given change. Was the income level stable before the change in question? Did it remain stable at the new level after the change? Carlo's case illustrates the importance of looking for lasting changes in income. At first, Carlo's change of occupation led to a drastic decrease in income.

"*I, so I thought, I'd start working there [as a special needs teacher] and then in May or something like that, I'd apply for jobs as a dental tech, because that [the change in occupation] went with an extreme pay cut. I'd make 700 Euro or something like that, because without training, public sector and also just a few hours, you know, it was only in the afternoon.*"

After this initially substantial decrease in income, Carlo's income slowly recovered during his vocational training and jumped back close to its pre-turning point level after Carlo completed his vocational training. As the change in income was profound but not lasting, this phase cannot be qualified as a turning point based on income as an indicator. Interestingly, Carlo did not mention the later increase of income in the in-depth interview, but a look at the change in income using Carlo's panel survey data reveals the recovery (see figure 4).[6]

Figure 4: Temporal change in income (Carlo)



[6] Due to privacy protection considerations, we use a smoothed line in this graph.

A further question is how to operationalize the notion of profound change. First, at what point should we talk about a drastic change? Without detailed information on a person's income history, we would have to rely on statements like Carlo's in which respondents talk about changes in their income. In mixed methods scenarios, or when using panel data only, one option is to compute the percentage change from one year compared to the average income over the previous years. We would then have to define a threshold that separates drastic from minor changes. This threshold could be based on an exogenous criterion (e.g., a jump in tax brackets) or an endogenous criterion (e.g., the 80th percentile of the distribution of income changes).

Second, how to deal with periods in which the respondents did not have a gainful employment, e.g., because of unemployment, parental leave, or invalidity? One option is to treat these as missing values and exclude them from calculation of income changes. This makes sense especially if changes in employment status are included as a separate indicator. If there is no such separate indicator, it may make sense to treat periods without gainful employment as "has no labor income."

Change in occupation

Change in occupation showed up as a profound change of socio-economic trajectories in several cases in our data set, and they are often discussed in the literature on turning points in labor market trajectories (e.g., Dupray and Epiphane 2014). Respondents usually reported strong dynamics of change in their lives surrounding their decision to change their occupation. Occupational changes often entail substantial costs of leaving an occupation in which one has acquired skills and established a career, to start over in an entirely different field of work. Hence, it makes sense that changes in occupation are the result of or at least accompanied by significant upheavals in an individual's life. In his interview, Carlo describes how hard the change from dental technician to special needs educator was for him. Carlo even tried to buffer the switch by

combining his training and work experience as a dental technician with his interest in teaching by becoming a vocational trainer, but that was not possible.

"*At the beginning everything is different, because you're in a completely different field. … [My new job] was something completely different, you couldn't even compare it with the other. … Education wasn't even the focus, it was more about child development, … social-emotional work was the clear focus.*"

"*The decision would have been much harder had I thought 'I'll change careers completely.' It was more of a gradual decision. It wasn't like I was sitting here one evening thinking 'Alright, I'll do something different.' It's a completely different direction, you can't really compare that [the two occupations].*"

"I went to get counseling at the work agency, what I should do in the future. Because back then I though perhaps I could still do something related to dental technician, like a vocational teacher or something. I thought since it's a vocation, maybe I could use that somehow. But the women at the agency was pretty quick to tell me: 'No chance.'"

In the end, what was initially supposed to be a hiatus from his job as a dental technician ("*I thought I was going to start looking for jobs as a dental tech sometime in May.*") became a complete and permanent change in occupation.

Profoundness and permanence of changes can also be captured using panel survey data. For instance, classifications of occupations, such as ISCO88 (Elias 1997) provide a useful measurement of occupation. We suggest using the two-digit measure, which captures sub-major occupational groups. Profound and lasting change would then mean that a person should have been established in an occupation (i.e., a two-digit ISCO88 group) for several years prior to the change, and the person should remain in the new occupation for several years (Dupray and Epiphane 2014) or continue changing his/her occupation without returning to the initial occupation. With this criterion, short-term occupational changes are ruled out, as are cases of unskilled workers who may not have a set occupation. In Carlo's case, information from the panel survey and the in-depth interview converged to show a change in occupation at age 32.

It may make sense to complement this indicator of change of occupation with additional information in order to address potential misclassification issues. Certain common career steps and job changes within a company, or changes between employers, may be flagged as changes in

occupation without being in line with the theoretical notion of a profound change in occupation. For instance, Monica, a trained sales clerk in her early thirties who participated in our in-depth interviews, worked as a sales clerk and changed employers several times, from a shoe store to a mobile phone distributor, to a large grocery retailer. A "change of occupation" indicator based on the two-digit ISCO score flags those changes, but since all involved similar skills, they shouldn't qualify as changes in occupation. Similarly, had Carlo changed occupations to become a vocational trainer for dental techs as he had planned, this would comprise a change according to the two-digit ISCO group, but not a profound change of occupation in theoretical terms. To address such issues, it may help to complement the ISCO or similar indicator with information on whether a respondent in fact changed employers (to hedge against cases of common career progression or job changes within a company) and transition frequencies between ISCO groups (to hedge against misclassifying very common changes between similar occupations).

Subjective relevance

There are several ways in which the subjective relevance of a substantial change may manifest itself and could be studied. If in-depth interview data is available, the most straightforward way is to look for changes in a respondent's socio-economic trajectory that the respondent describes as crucial, profound, or in other ways salient in their life. But we should not limit ourselves to this straightforward way of identifying subjective relevance of a change because respondents may convey relevance in ways other than stating it explicitly. For instance, they may describe at length how life changed (or failed to do so) before, during, or after a given change in socio-economic trajectory.

For instance, Carlo's accounts suggest a period of substantial changes in his subjective well-being before, during, and after his change of occupation. The baseline situation was his long dissatisfaction with his job and especially his employer.

"*I was extremely angry. Just, it was a very bad time, I was much more aggressive and in a bad mood and, yeah, withdrawn. Because I had so little time. It was just very bleak. When I think back, I would even say that that was a bit like a depression, in parts.*"

Carlo's situation improved when the company's owner changed ("*It was like a big family, a little bit. So in that sense I felt good.*"), but his long working hours and the stress that came with his job still bothered him ("*I was quite unhappy with my job*."). His subjective situation improved again after he changed his profession to become a special needs teacher.

"*It just all meshed well. He [the son] went to kindergarten, so I was able to take him there in the morning. Then I went to work and got back home and so it was all good. Really, one of the best times of my life so far, I would say. That's how I felt.*"

An analogous strategy of looking at changes in a person's assessment of her or his life situation can be used to operationalize subjective relevance using panel survey data. Important life events or changes such as unemployment, marriage, or widowhood affect subjective life satisfaction (Clark et al. 2008; Lucas 2007). Disruption in subjective well-being over an extended period in the life course can thus indicate that life course processes occur that are subjectively important to the person in question. Disruptions can manifest as substantial increases, decreases, or volatility over several years. One way to capture such disruptions over time is to compute the coefficient of variation of a well-being indicator (e.g., global life satisfaction).[7] The coefficient of variation provides a standardized measure of variance, in our case over time. It can be computed

[7] Alternative measures include average domain satisfaction, affect balance, preference realization, as well as various composite measures (Andrews and Withey 1976; Schimmack 2009).

over the entire period under investigation or over a rolling window of certain length (e.g., four years).

Spillover between life domains

Spillover (or contamination) between life domains captures the parallel processes that lead to up to, accompany, or follow the focal change in socio-economic trajectory (Bidart 2013, 2018; Carlsson 2012; Laub and Sampson 1993; Supeno and Bourdon 2013). The events and changes may concern the focal person or members of their close personal network (in line with the notion of linked lives; see Elder et al. 2003:13–14). One way to operationalize spillover between life domains is to look for phases in a respondent's life course where many changes and events occur across life domains, i.e., phases with a high density of changes and events. This could be minor changes and events in the focal domain of education and the labor market (e.g., changing one's field of study or one's position in a company), but also major changes and events in other life domains, such as family (e.g., birth of a child), health (e.g., a hospital stay), or geographic moves.

Periods with high density in events and changes can be identified through detailed case reconstructions. Revisiting at Carlo's case, based on our case reconstruction we can observe a higher density of life events between the ages of 31 and 35. The in-depth interview data suggests that the turning point gained momentum around the age of 27, when Carlo's company changed owners (Changes and events 2 in figure 3), and ended as he started working in his new profession after completing his vocational training (as indicated by colored background). The phase of higher density of changes and events falls squarely into this period. Moreover, the changes and events occur in various life domains; e.g., Carlo's grandparents become nursing cases, his first child is born, his partner leaves her job to start medical school, and his grandfather dies. Especially the

birth of Carlo's child and his partner's transition into university studies played a role in the dynamic of the turning point.

"And so that, yeah, it got better and better. … There was the great job, and also I just had more time for my child. I thought back to, if you'd still be working as a dental tech, you'd be seeing him on weekends. He'd be asleep when I came home. … Now I had time for him and I was also able to help out my girl-fried with her studies. That promises, once you're done, it promises much more money. … So it made sense to help her get that done quickly. And with my job at the school, that was possible."

This brief passage encapsulates the notion of turning points as a set of parallel changes from various life domains. For now, the direction in which these processes influence each other is not crucial; this can be a key question when analyzing turning point dynamics (e.g., Bidart 2013). To identify turning points, it suffices to recognize the periods in which parallel processes and changes are at work.

If no in-depth case information is available, high density of changes and events could be captured using panel data and a list of changes and events, and a rationale for determining density. The list of changes and events will vary depending on the type of turning point under study, on specific research questions, as well as data availability. Options include: death of a spouse, child, or close relative; geographic moves; marriage and divorce; entering and terminating a romantic relationship; birth of a child; hospitalizations; child leaving home; spouse or partner changing jobs or occupation or becoming unemployed.[8] Summing up all chosen changes and events in a given year or in a given time period yields an indicator of density. We can then compare densities within each case and between cases to identify periods of distinctively high density. The period of high density can be defined as a single year with high density of changes and events (Bidart

[8] This list reflects changes and events that were mentioned by the respondents during their accounts of their labor market careers, as well as research on important life events (e.g., Cygan-Rehm, Kuehnle, and Oberfichtner 2017; Richards, Hardy, and Wadsworth 1997; Sbarra, Hasselmo, and Bourassa 2015), but it is neither exhaustive nor exclusive. More important than the exact content of the list seems to be to choose a clear set of changes and events to ensure a systematic comparison within and across cases.

2013:262), or several subsequent years with high densities. It should fall between periods of lower density (Abbott 1997).

Aggregation of indicators and dimensions

A key question is how to aggregate indicators and dimensions to assess whether a turning point is present or absent. First, this requires deciding how indicator(s) connect to their dimension, and how the three dimensions relate to turning points. As we discuss above, we suggest that the three dimensions are essential and need to be present for a life course process to qualify as a turning point. Regarding the indicators for the different dimensions, in some cases they are substitutable (i.e., at least one of them should be present, as with the different variants of "change in trajectory"), while others are essential (i.e., all have to be present, as with our suggestion for operationalizing change in occupation).

Second, there is a temporal dimension to the aggregation procedure. Not all three dimensions necessarily manifest at the same time during a life course; for instance, a period of high density of events may precede the focal change in trajectory, but if they occur too far apart in time, it would make little sense to see them as pertaining to a turning point. Formulating transparent rules for how dimensions have to coincide is important for producing a systematic conceptualization of turning points. One approach could be to look at a given time period overall (e.g., the first ten years after labor market entry) and check whether there is any change in the socio-economic trajectory paired with subjective relevance (e.g., in the form of changes in satisfaction or well-being) and spillover between life domains (e.g., in the form of high density of events and changes). Another approach could be to require the three dimensions to coincide within a timeframe (e.g., four years) at any point in said ten-year period of labor market entry, using a rolling window over that period to assess this co-occurrence.

CONCEPT USEFULNESS: DISTINCTIVENESS AND ADAPTABILITY

In the following section, we reflect on the usefulness of our proposed concept regarding two key aspects: its ability to distinguish turning points from other life course processes, and its adaptability to research topics beyond socio-economic trajectories.

Distinctiveness: Turning point v. transition

The proposed concept should allow distinguishing turning points from other phenomena relevant in life courses. One of the most common life course processes that is often confused or conflated with turning points is transitions (e.g., Hareven and Masaoka 1988; O'Carroll and Gray 2010), possibly because both comprise relevant life course processes and the two often coincide. Indeed, a transition can be part of a turning point, and a turning point can lead to a transition, but that is not always the case. In order to better analyze and understand life course processes, an unambiguous distinction between turning points, transitions, and other processes is important.

As stated earlier, transitions are changes during the life course that include a status passage, i.e., a change of social role and attached social norms and expectations (Wingens et al. 2011:13). To illustrate how our concept helps distinguishing between turning points and transitions, consider the example of Sevda. Sevda is the daughter of a Turkish immigrant and his German-born wife. The father started working in construction after migrating to Germany in the late 1970s. He later completed a university degree, and during his studies he met his future wife. The father went on to earn a doctorate and worked in adult education; the mother became a homemaker. Growing up, Sevda experienced severe problems with discrimination in her small hometown, all the way from primary school until she left town to enter university. At the same time, she struggled with what she perceived as restrictive rules from her parents. Her father did not allow her to have boyfriends („*When I was 13, 14 years old, I fell in love, and he told me in no uncertain*

terms that that was out of the question."), enforced strict curfews („*going out was not an option*"), forbade his daughter to join a sports team („*I [would have liked to join a sports team], but my parents were against it for some reason*") and maintained strict control overall („*They put their nose in everything.*").

Sevda recalls just wanting to leave her hometown during her secondary school years. Despite these issues and a period of academic struggles, Sevda earned a secondary school degree that allowed her to enter university. In choosing a career for her studies, her main criterion was that it should not be offered in a town near her home so that she would have to move in order to attend.

„*That [was] the idea, to move out after earning the Abitur [university entrance degree]. The two years before that I just got through with that thought, that I was going to move out. ... That was the plan and that's why I thought I'd choose a major that no university close by would have. So that I could not commute, but had to move out.*"

She accomplished her goal, and this transition into university and out of her parents' house changed her life profoundly. Part of this change was a diminishing focus on her education, which led her close to dropping out of university.

„*There was no mandatory attendance, it was boring as hell, and you had all this new freedom that you never had before, with your own place. So I just didn't go [to university classes]. Parties. Sleeping in. Just not interested. Everything was new. Big city, I didn't know that.*"

However, she instead decided to switch her major subject (from law to education), eventually earned a university degree, and became a schoolteacher.

Applying our concept of turning points to this example, we could argue that this phase shows subjective relevance and spillover between life domains. During the phase, among other changes and events Sevda moves out of her parents' house, moves geographically, transitions from school into university, and starts a romantic relationship. Moreover, Sevda recalls many negative

experiences at home and in school, and describes her time after moving to the city of her university as an entirely new, positive experience.

However, the phase does not qualify as a turning point because Sevda's social status trajectory does not change. After graduating from university-track high school (*Gymnasium*), she makes the common transition to university and, despite temporary problems and a switch in majors, she finishes her studies. Had Sevda's problems during her studies led to her dropping out of university and pursuing a lower-educated occupational track, the phase described above would qualify as a turning point in her social status trajectory because of a fundamental change in educational track.

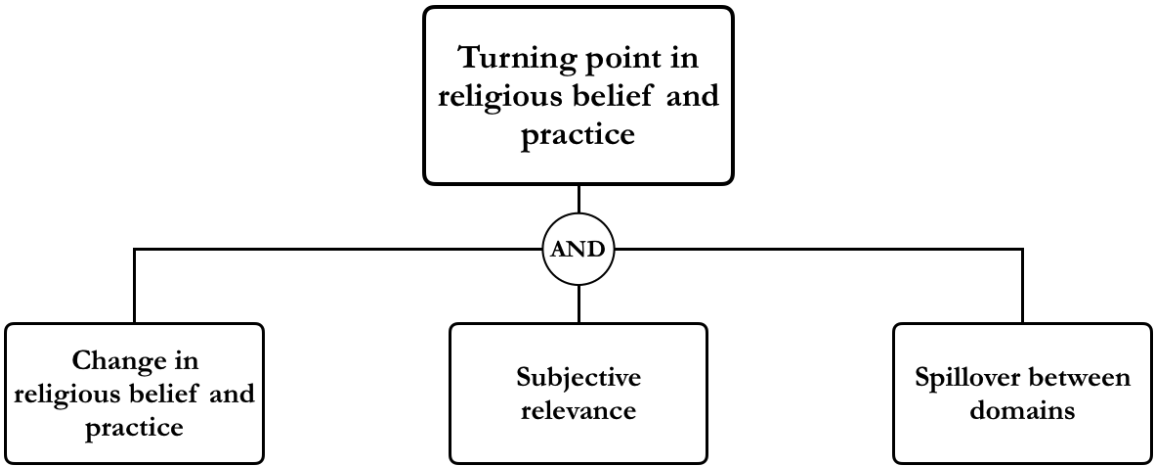
This example suggests that the multi-level concept of turning points we propose allows distinguishing turning points from other important phases of change in the same life course domain (in this case, the transition from school to university), but at the same time provides a conceptual language to describe why such other phases may still be important to analyze in order to understand a given life course. To further demonstrate concept distinctiveness (and analyze empirically how often transitions and turning points coincide), it would be useful to examine how often transitions and turning points coincide in life courses, using a large-N data set. Regarding turning points in socio-economic trajectories, we would expect many turning points to entail some form of transition, but many transitions to not coincide with a turning point.

Concept adaptability: Religious belief

Analogous to generalizability of empirical findings, an important quality criterion for concepts is their adaptability to similar phenomena in different research topics. We argue that our concept of turning points provides a blueprint for analyzing turning points in life course studies beyond social status trajectories. Revisiting the concept structure we proposed in figure 2, we suggest that the dimensions subjective relevance and spillover between life domains should apply to any type

of turning point. Hence, by adapting the domain dimension and the indicators used to capture it in the data, researchers can transfer the concept to a different research area, such as romantic relationships, health, criminal behavior, or religious beliefs. Figure 5 provides an illustration of this adapted concept structure for turning points in religious belief and practice, which are often connected to religious conversion after periods of crisis in life courses (Smilde 2005).

Figure 5: Adapted concept structure: Turning points in religious belief



As an example, we present the case of Paola, a daughter of Italian and German parents who grew up in the south of Germany. Paola converts from Catholicism to Jehovah's Witnesses at the age of 14.

„*So I was always very religious. I was raised catholic. And throughout my childhood, we were quite embedded church, going to youth meetings there, and always attending service on Sundays, and all that. ... And... then one day this Italian-speaking lady came to our door. She was a Jehovah's Witness. I was about ten years old. That was shortly after that story with the [her father's] deportation. ... And she kept saying she wanted to talk about the Bible and show us things from the Bible and all that. And I was the little girl in the background, and would listen and watch, and she would come regularly, and would come inside. ... And (.) [sighs] yes, for me it all became more and more convincing. ... (.) And (.) yeah, eventually, eventually I couldn't, both my mother and my sisters, and myself, too, we couldn't identify with all that church stuff anymore. ... And I knew that was my path. And so when I was 14 I decided to get baptized as a Jehovah's Witness. ... I also felt it, it wasn't just something intellectual that I'd read in a book, but it was something that I was allowed to feel in my life. ... And that's how it is to this day.*"

In Paola's own perception, this marks a pivotal moment in her life. The conversion falls into a period of turmoil, with the most traumatic experiences being her father's arrest and deportation, and the death of her sister. Around the same time, Paola recounts having severe mental health issues bordering on depression. In other words, we can observe a period in which there was a drastic change in religious belief, together with a period of spillover between life domains and high subjective relevance of the change in religious belief. Thus, our proposed concept helps identifying and making sense of turning points in other life course domains. In our view, what connects turning points from different domains is (a) that they are accompanied by high subjective relevance and spillover between life domains; and (b) that the changes in a given domain should be profound and lasting.

CONCLUSION

The concept of turning points is one of the most important concepts in life course studies. While many researchers agree that turning points comprise profound changes in individuals' life courses, concrete conceptualizations of the phenomenon diverge between studies. Three existing perspectives (what we call evaluative, formal, and case-holistic) place different emphases in their understanding and conceptualization of turning points. Taken together, the three perspectives that have been developed in the literature provide crucial insights to our understanding of turning points, but they also comprise a roadblock to more continuous development of our understanding of the phenomenon. Using, or at least referring to, a conceptualization that captures the different relevant elements and dimensions of the phenomenon promises better comparability of empirical findings and would facilitate a more cohesive research program on turning points in life course trajectories.

In this paper we combined and refined existing conceptualizations of turning points in the domain of socio-economic attainment, employing in-depth case analyses that used longitudinal survey data and retrospective in-depth qualitative interview data. Based on a dialogue between our data analysis and the existing literature, we suggest defining turning points along three dimensions: change in social status trajectory, subjective relevance, and spillover between life domains. Those three dimensions help capturing the complexity and multidimensionality of this social process. We discuss these dimensions, possible indicators, and challenges of aggregation, using our mixed-methods data to present exemplary cases. Moreover, we discuss distinctiveness and adaptability of the concept. The integrated conceptualization we propose helps increasing comparability between analyses and thereby aims to contribute to more continuous progress in our understanding of turning points.

One area of future research could focus on further concept development. We discussed a number of open questions and challenges for operationalization and aggregation in this paper, e.g., regarding change in income or occupation. Moreover, research questions dealing with other life domains beyond socio-economic status may be fruitfully tackled employing the proposed concept of turning points. Future research may use panel data to study how prevalent turning points are, during which phases over the life course turning points are most common, and whether there are differences in the prevalence of turning points between nominal groups (e.g., gender or ethnic background). Mixed methods research designs are particularly well suited to studying of turning points because they provide detailed information on respondents' life courses together with standardized measures. Another fruitful avenue could be to produce a typology of turning points, e.g., regarding an upward or downward swing of the socio-economic trajectory or whether the change in the socio-economic trajectory is at the center of the turning point dynamic, or comprises a collateral change. Finally, the proposed concept may be useful in furthering a line

of inquiry championed by Bidart and colleagues (see, for example, Bidart 2006; Bidart and Brochier 2010), in which they examine the driving forces and inner dynamics of turning points. Our case analyses indicated that the sequence around and in the turning point are characterized by strong (transitional) dynamics affecting multiple life domains. By providing a conceptual basis for such future research and facilitating analyses and comparisons between studies of the phenomenon, our paper contributes to research in life courses in general and trajectories in specific fields, such as socio-economic attainment, criminal behavior, or youth development.

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