

Chapter 3

Uncertainty and Narratives of the Future: A Theoretical Framework for Contemporary Fertility



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*Imaginative forecast of the future is this forerunning quality of
behavior rendered available for guidance in the present.*

John Dewey

3.1 Introduction

Understanding the relationship between economic and fertility trends is a challenge for demographic research. Karaman Örsal and Goldstein (2018) took a large group of middle–high income countries and looked at the relevant data from the post–war period onwards. They showed that, since 1970, good economic conditions have led to higher fertility, while bad economic conditions mean lower fertility, suggesting a pro–cyclical trend (see also Myrskylä et al. 2009). However, a close look at the demographic trends at the beginning of the twenty–first century casts doubts on this kind of interpretation. Economic indicators suggest that European countries are currently moving out of the Great Recession, whereas fertility trends are not so positive. For instance, in 2009 Northern European economies resumed economic growth, but their total fertility started to decrease substantially. In Norway, total fertility dropped from 1.98 in 2009 to 1.6 in 2018, the lowest ever in peacetime; similar changes, and even lower fertility levels, have been observed in Denmark, Finland, Iceland and Sweden (Comolli et al. 2019). On the other side of Europe, Mediterranean countries such as Italy, Greece and Spain, after a period of fertility rebound, re–entered, in the same period, a regime of lowest–low fertility, with total fertility around 1.3.

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Explanations for fertility decisions based on structural constraints—such as labor, housing condition, or income—may account for a substantial share of cross-country differences in fertility, nevertheless important questions remain unanswered, posing major challenges to contemporary demographic theories. Given the disjuncture between economic and fertility trends, what are the drivers of the low fertility in contemporary European societies? The central explanation we put forward for this new state-of-affairs is the rise of *uncertainty*. The future is inevitably uncertain, and uncertainty is a structural factor implied in any long-term decision-making process, such as the fertility choice. In addition to this fundamental uncertainty, though, we would argue that recent economic developments in Europe—namely, the increasing speed and volatility of outcomes of globalization, and the new wave of technological changes—have amplified uncertainty in people's life, adding a contingent component of economic uncertainty. Economic uncertainty makes it increasingly difficult for individuals to imagine their future, choose between alternatives, and form strategies.

Notwithstanding its theoretical importance, uncertainty is rarely considered in traditional explanations of fertility. We suggest that the interpretation of recent fertility trends needs a clear action theory where uncertainty has a central role. We argue that fundamental uncertainty needs to be conceptualized and operationalized taking into account that people use works of imagination, producing their own *narrative of the future*—i.e. imagined futures embedded in social elements and their interactions. The medium and long-term future cannot be predicted with any degree of certainty, but people can sketch out their personal narratives of the future, and, on the basis of these, take decisions. In the “life course cube”, a re-conceptualization of the life course as a set of interdependences between time, life domains, and levels of analysis, this is referred to as the “shadows of the future” (Bernardi et al. 2019: 4). The narratives of the future become potent driving forces for fertility intentions: people might plan a child *according to* or *despite* uncertainty, irrespective of structural constraints and their subjective perceptions. Fertility intentions follow the desire for childbearing and anticipate concrete behavior by reflecting the combined effect of desired fertility and situational constraints (Thomson and Brandreth 1995). Fertility intentions have been generally regarded as a fairly suitable predictor of behavior at the individual level (Westoff and Ryder 1977; Schoen et al. 1999), provided that a time frame for the realization of the intention is set (Régnier-Loilier and Vignoli 2011).

We continue by offering a view on the main conceptualizations of uncertainty and defining the theoretical perspective we adopt. Then, a brief review of existing theories on reproductive behavior, from past to more recent theoretical approaches, is presented. Overall, each one of the previous approaches added various and novel *tesserae* to the mosaic of low fertility; nevertheless, none of them explicitly addressed the role of (rising) uncertainty. We continue by proposing a novel framework (the Narrative Framework) for the study of fertility decisions under uncertain conditions based on expectations, imaginaries and narratives: we argue that narratives of the future might help to disentangle the nature and the role of the elements

involved in the fertility decision-making process. Then, we address the causal validity of the narrative framework for contemporary fertility. We conclude by highlighting the advantages of taking into account narratives of the future in fertility research.

3.2 The Notion of Uncertainty

In the literature, there is an ongoing debate over the definition of uncertainty and its relevance for social dynamics. A valuable starting point is the classical work of Knight ([1921] 2006), who distinguished between risk and uncertainty. In a risky condition, the probability distribution of future events is completely known, and outcomes can be calculated or, at least, estimated by classifying on the basis of a known probability; in an uncertain condition, outcomes are not homogeneous enough to be estimated through probability calculus, or they are purely unknown. More recent definitions of uncertainty do not pose a particular challenge to the Knightian distinction between risk and uncertainty, but they highlight specific, or recurrent, features in the proposed notions of uncertainty. In Table 3.1, we offer a synthetic schema of the most important definitions of uncertainty given in the recent economic and sociological literature, classifying various types of uncertainty by their source. All the identified conditions of uncertainty imply that future outcomes cannot be measured probabilistically.

A common source in creating personal uncertainty for a given actor, that we find in some but not all authors' conceptualizations, are *social interactions* and the roles of other actors. Human behavior can never be totally predicted. Thus, personal decisions and plans based on others' expected (rational) actions may easily fail. Individuals may learn from past experiences, reflect on their cognitive processes, and act strategically using their imagination and creativity: these capacities allow them to shift away from the expected course of action. A second conceptualization of uncertainty focuses on the quality and the quantity of the *available information* needed for the selection and evaluation of the alternative courses of actions and their consequences. Uncertainty may arise because information is missing or because there is no feasible access to information due to ignorance or because of the limited time availability for collecting it. Finally, the last column of Table 3.1 shows the more radical condition of uncertainty, or *fundamental uncertainty*, that can be an effect of the other two, but may also arise independently. Under fundamental uncertainty, the effects of the present action cannot be successfully forecast or estimated; the list of possible future outcomes is not complete, nor can the elements involved in the course of action and their roles be known with precision.

In the context of reproductive behavior, a fertility decision is always taken in a condition of fundamental uncertainty: despite the level of uncertainty experienced by individuals and couples, a fertility decision has to be taken in the present. Through this decision, people plant a seed that will germinate and grow in their

Table 3.1 Types of uncertainty classified by their sources

	Social interaction	Information	Fundamental
Davidson (1996)		Epistemological uncertainty: a complex situation involving too much information that cannot be computed	Ontological uncertainty: creativity and innovation cannot be predetermined but only observed retrospectively
Dequech (2000)		Ambiguity: relevant information is missing or cannot be accessed	Fundamental uncertainty: the creativity implied in the future cannot be deduced from present information
Lane and Maxfield (2005)	Semantic uncertainty: actors are uncertain about what a proposition of other actors means	Truth uncertainty: actors are uncertain about whether well-defined propositions of future consequences are true or not	Ontological uncertainty: refers to the entities that inhabit the world, their modes of interaction, and the results of their interaction
Elster (2009)	Strategic uncertainty: strategic action of other actors is a spiral source of uncertainty that cannot be defined	Information gathering uncertainty: the gathering of information cannot be rationally stopped	Brute uncertainty: no uniform distribution of cases can be invoked
Beckert (2016)	Social interaction uncertainty: third parties' actions cannot be accurately predicted, even in game theory models	Complexity uncertainty: a complex situation does not allow utility maximization	Fundamental uncertainty: innovation is unpredictable and cannot be estimated in present calculus
Tuckett and Nikolic (2017)			Radical uncertainty: equivocal situations in which uncertainty about the outcomes of actions is so profound that it is both difficult to set up the problem structure to choose between alternatives and impossible to represent the future in terms of a knowable and exhaustive list of outcomes to which to attach probabilities

Own elaboration based on Beckert (2016)

short- and long-term future. Parenthood is a unique and irreversible experience, where what can be learned from the past does not often apply to the present and to the future, not least because children change like their parents through the years, and because children differ from one another.

Fundamental uncertainty has always accompanied fertility decisions; this is not a novelty, then. Nevertheless, recent societal changes experienced by post-industrial societies—i.e. changes classified under the umbrella of *globalization*, and the

neo-liberal policies that accompanied it—added new contingent elements of uncertainty to life plans. The impact of economic uncertainty on demographic behavior has been at the core of demographic research since its earliest years. However, it has been recognized that a “harsh new world of economic insecurity” (Hacker 2019: xvi) only appeared as of the 1980s. This was a world characterized not only by increasing instability in individuals’ employment, but also by rising inequalities (OECD 2011). Although inequality and uncertainty in the economic context are not the same thing, they are strongly interwoven (Hacker 2019). In the era of globalization, economic uncertainty is also amplified by the intensification of worldwide social relations through the information and technology revolution. Social interactions are more and more numerous and complex, and the media often multiply uncertainty as growing information does not imply its intelligibility and utility. For a majority of citizens, the media are an essential source of information on complex economic issues (Boomgaarden et al. 2011), which also evaluate, filter, and simplify information. The perception of economic uncertainty is thus strongly anchored in public images produced by the media and other leading opinion formers, like politicians. During the years of the Great Recession, media news contributed to the emergence of a European public sphere with a pessimistic view of a stagnant, underperforming continent (Davis Cross and Ma 2013). The Great Recession was popularized by a tsunami of news that focused on the crisis as the *evil* of contemporary European societies (Cepernich 2012), even in countries that did not experience a *real* economic recession. This is a novelty compared to previous recessions. In the Great Depression of the 1930s, when a rapid surge in unemployment was followed by a drastic drop in fertility, economic information was not as amplified and diffused as it is in the era of globalization.

Classical theoretical perspectives on fertility did not deal with the issue of fundamental uncertainty, nor with the increased salience of uncertainty due to globalization dynamics. In the Narrative Framework, we acknowledge the concept of uncertainty and study how a fertility decision can be taken according to or despite it.

3.3 Classical Perspectives on Low Fertility

In the second half of the twentieth century, the two most influential perspectives on fertility have been the New Home Economics (NHE) (Becker 1964) and the Second Demographic Transition (SDT) (van de Kaa 1987; Lesthaeghe 1995). Becker (1981), following a strict microeconomic approach, considers fertility behavior as an individual action oriented to utility maximization. The concept of *utility* remains largely undetermined (Strandbakken 2017), but thanks to this indeterminacy the microeconomic approach has been applied to family decisions as well as to almost all domains of social life. Utility maximization implies that the availability of higher economic resources—driven, for example, by the increasing contribution of women to household income—may have ambiguous effects on fertility. On the one hand, women’s employment fuels permanent (household) income and may foster fertility

(*income effect*). On the other hand, women's employment reduces the time for childrearing; therefore, working and having children may become competing tasks (*substitution effect*). Sociological approaches refer to the latter mechanism as evidence of *role incompatibility*—or the inability to combine mother and worker roles in a modern economy where home and workplace are separated. Despite the existence of empirical evidence on this kind of substitution effect (Matysiak and Vignoli 2008, 2013), the application of a strict economic approach to fertility behavior may create a stylized and unrealistic type of family agency,¹ in which partners *calculate* the costs and benefits of a child, *discounting* the actual cost in the light of future utility (Caldwell 1982). Usually, human actions are a mix of different ideal types of agency (Weber 1978 [1922]), and fertility decisions, in particular, are complex decisions where interests, values, opportunities, and social ties interact. For example, a different explanation for declining fertility in spite of increasing levels of household income is provided by Schoen et al. (1997). They opposed simplifying the fertility decision to the economic cost of children, and claimed for their value as social resources: As kin ties weaken and children bring comparatively fewer social or economic resources to their parents, fertility is unlikely to recover in low-fertility populations.

The other classical perspective on low fertility, the Second Demographic Transition (SDT; van de Kaa 1987; Lesthaeghe 1995), builds, instead, on the sociological foundations of value change and individualization. The idea is that, in post-modern societies, individuals, in particular women, reprioritize career and self-actualization over family and childbearing. Even if not stated explicitly in the original formulation of the theory, this argument has often been used to argue that the increase in women's education and employment anticipated fertility decline in Western countries during the second half of the twentieth century (Guetto et al. 2015).

The SDT does not contemplate economic uncertainty, and from the NHE one can only indirectly conclude that it may matter. Income level is important because people make decisions subject to budget constraints and if the budget is uncertain, they cannot make such decisions. Generally speaking, in these two frameworks the demand for fertility is conceived as being determined by permanent (household) income, the opportunity cost of children, tastes, and self-realization needs—all factors assumed to be relatively stable over individuals' life courses, and subject to a very slow pace of change at the societal level. In recent years, however, the role of (increasingly pervasive) uncertainty cannot be disregarded in the fertility decision-making process. After all, on this uncertainty will depend important fluctuations in income, wealth, and preferences (Hacker 2019).

More recent developments in demographic theory stress the importance of gender equity within couples and at the societal level in understanding trends and cross-country differences in fertility rates (McDonald 2000). According to the

¹The concept of agency refers to the human capacity to act independently or strategically irrespective of the influence of the social structure (Emirbayer and Mische 1998: 988).

theory of multiple equilibria (Esping-Andersen and Billari 2015) or gender revolution (Goldscheider et al. 2015), (very) low fertility rates would be a temporary phenomenon following the rise in female employment. However, fertility rates would, these theories proffer, tend to return to replacement level as societies adapt to new women's roles. Beyond being challenged by the recent evidence of a fertility fall in gender-egalitarian Nordic countries, this approach does not assign any relevant role to rising uncertainty. The change in gender role attitudes in recent decades have inspired a further interpretative line. Specifically, the diverging perspectives between the male and the female member of the couple, namely any competition between them, have been argued to be an underappreciated element in the literature. This competition, it is suggested, would potentially foster a retreat from marriage and contribute to low fertility as men increasingly withhold economic support from their children (Schoen 2010). Once again, even if economic aspects are part of the framework, especially in terms of power in the relationship, uncertainty is not accounted for.

3.4 Objective or Perceived Economy?

In demographic research, economic uncertainty has so far been viewed as an individual risk factor, mainly related to the labor market (e.g., unemployment, short-term contract jobs, underemployment, or a combination of these; Mills and Blossfeld 2013; Vignoli et al. 2012, 2019; Dantis and Rizzi 2020). A persistent experience of employment uncertainty may lead to the perpetual postponement of family formation and, as a result, to a smaller family or even to no family at all (Busetta et al. 2019). Several studies tried to assess the effect of objective employment indicators on fertility (see Alderotti et al. 2019 for a meta-analysis of micro-level research findings for Europe). What is generally not considered in these studies is that objective indicators alone are perhaps not good proxies of the perceived economic condition, because individuals differ in the extent to which they feel, tolerate and react to the same objective condition.

In the light of these limitations, a different stream of research focused on the effects of perceived economic uncertainty on fertility. Ranjan (1999) claimed that perceived economic uncertainty played an important role in fertility trends in post-communist countries after the communist regimes had collapsed there. In the last years, information regarding perceived economic conditions is more frequently included in surveys. For instance, the availability of individuals' perception of economic conditions in the German Socio Economic Panel (GSOEP), enabled Kreyenfeld (2009, 2016), Bhaumik and Nugent (2011) and Hofmann and Hohmeyer (2013) to explore its relationship with fertility. Even if these studies recognized that fertility choices are not only influenced by the *objective side* of uncertainty, they fail to recognize the future-oriented nature of uncertainty.

An increasingly popular approach used in demography to identify the fertility decision-making process is the socio-psychological framework of the Theory of Planned Behaviour (TPB) (Ajzen 1991), which stems from the Theory of Reasoned

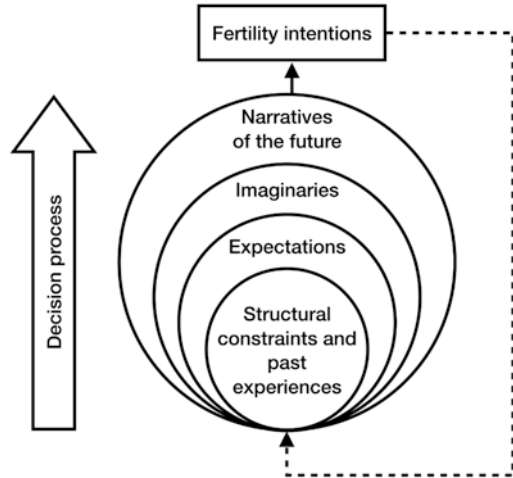
Action (Fishbein and Ajzen 1975). In this conceptual model, an action is the result of actors' *attitudes toward the behavior*, *subjective norms* (dependent on the relevant others' perceptions of the behavior) and *perceived behavioral control* (self-efficacy) (Ajzen and Klobas 2013). These constructs are operationalized within the TPB in a hypothetical situation in the next three years. The empirical validation of the TPB is highly problematic and much debated (Schoen et al. 1999), especially in terms of the role of background factors and structural constraints (Mencarini et al. 2015). Nonetheless, the TPB is one of the few forward-looking approaches developed for the study of a fertility decision-making process. The TPB tries to predict fertility behavior with a set of elements that still rely on a deterministic approach, disregarding an individual's capacity to deviate from the expected course of action. From our perspective, hence, the TPB misses one crucial element in its forward-looking approach, namely the imaginative capacity of human agency. In the Narrative Framework, the TPB elements are part of the structural constraints that shape the course of action, but individuals may also deviate from an expected course of action thanks to their imaginative capacity.

3.5 The Narrative Framework

We propose a conceptual framework—the Narrative Framework—to investigate the fertility decision-making process in a state of fundamental uncertainty. The study of the future is a growing field in many branches of economics, sociology, psychology, psychoanalysis and anthropology, but it is still not considered while analyzing contemporary fertility. We build upon these theoretical bases, complementing our proposal with a conceptual distinction between expectations, imaginaries and narratives.

In real life, the separation between expectations, imaginaries and narratives is often blurred, not least because each one influences the other. For analytical purposes, a conceptual distinction is necessary, however. People form their own *expectations* on the basis of structural and contingent *constraints*. Although expectations come from structural constraints and past experiences, their influence is not deterministic, and the knowledge of the past does not include all future possibilities: the future is not merely a “statistical shadow of the past” (Davidson 2010: 17; Beckert and Bronk 2018). Expectations are thus the foundation for the imaginaries of the future, although they often do not coincide. *Imaginaries* draw on expectations, but they may also deviate from the expected future, thanks to the imaginative capacity of humans. Structural constraints, expectations and imaginaries find their proper place in *narratives of the future*, the less abstract level of the imaginative capacity, able to sort them in an intelligible and actionable manner. The aforementioned elements are included in the narrative of the future and, at this level, they influence fertility intentions. We propose a graphical representation to better exemplify the decision-making process (Fig. 3.1). Each of the four levels—narratives of the

Fig. 3.1 Fertility decision-making process under conditions of uncertainty: a stylized representation of the Narrative Framework



future, imaginaries, expectations and structural constraints—stems from the previous, but it is not fully determined by it; in fact, each element can exceed what can be expected from the previous elements. Fertility intentions, of course, will also have effects on the structural constraints and the past experiences of the next courses of action.

The fertility decision-making process is a clear example of a situation of fundamental uncertainty where expectations, imaginaries and narratives of the future matter together with any structural constraints and past experiences. Typical questions arising during the decision-making process are related to structural constraints: they might be of a micro nature (e.g., housing or labor circumstances), of a meso nature (e.g., the role of familial or friendship networks), or of a macro nature (e.g., the context for balancing paid work and family life). But these objective conditions cannot alone predict fertility intentions: Facing the same structural constraints, people do not necessarily make the same choices. For example, an uncertain labor condition may not be an obstacle to having a child if strong economic growth is expected, but it may inhibit fertility when coupled with the expectation of economic decline (expectations). However, neither expectations nor structural constraints alone can predict a fertility decision: human beings still have agency—i.e. an imaginative capacity, something which allows them to deviate from the expected course of action. For example, a wishful future involving numerous descendants or a strong belief in the sacredness of family (imaginaries) may encourage childbearing notwithstanding adverse economic expectations or a condition of income hardship. Expectations and structural constraints together with (family) imaginaries contribute to the definition of a narrative of the future driving the fertility decision-making process. Here positive fertility intentions may be formulated *despite* the uncertainty of the future or fertility may be avoided *according to* the condition of uncertainty.

The following subsections present the different elements of the narrative theoretical framework.

3.5.1 *Structural Constraints*

The contingency of action under uncertain conditions is limited by structural constraints, such as cultural frames, conventions, rules, and institutional settings (Beckert and Bronk 2018). All these elements reduce the potentially limitless possibilities of action by imposing a *limitation* (Offe 1998). This limitation, however, does not imply the entire predictability of the future. Indeed, the limitations deriving from structural constraints can be encouraged, moderated or thwarted by the agency of the elements involved (i.e., individuals, organizations, social groups, technology, and so forth) and by their contingent interpretations.

The fertility decision-making process is clearly influenced by the presence of structural constraints. In Western countries, the fall in fertility rate from the first to the second generations of migrants from high-fertility countries shows how the social context influences fertility decisions (Kulu 2005). Different generations of immigrants are, indeed, influenced by different structural constraints: local cultural values, as opposed to country of origin cultural values, seem to affect fertility decisions differently for the first and the second generations of immigrants. While the fertility decisions of first-generation migrants are likely to be strongly influenced by the predominant cultural values in the origin countries, second-generation migrants, being exposed to cultural values of the destination country, are more likely to distance themselves from the values of their parents (Guetto and Panichella 2013). In this case, the influence of the social context in fertility decision varies in relation to the age and the period of exposure to a different culture and institutional setting over the life course.

The influence of the structural constraints on decision and action is not always mechanical, however. Bourdieu ([1980] 1990), for example, referred to the concept of *habitus* as, also, a resource for action. In his original framework, the *habitus*, shaped by past experiences, is incorporated into the body with a pre-conscious set of expectations about the future. Nonetheless, structural constraints, despite being naturalized and taken for granted, can also be “strategically mobilized in accordance with the contingencies of particular empirical situations” (Emirbayer and Mische 1998: 978). Structural constraints often shape the life course with a *silent* reduction in possible actions. But they can also be strategically used by the actors, for example through their inclusion or exclusion in an expected future. Within the second generations of migrants it may, for example, happen that the traditional values of the country of origin are deliberately used to build a personal identity different from that of native peers. In this case, the number of children may increase despite the expected influence of local cultural values, thanks to the strategic use of structural constraints.

3.5.2 *Expectations*

Beliefs about the future are the compass guiding the decision-making process: “When making decisions, actors associate certain future results with the course of action they are contemplating, connecting numerous outcomes with different possible decisions. These perceptions are known as expectations” (Beckert 2016: 35). Expectations represent the whole complex system of beliefs about the future that an individual takes into consideration in the decision-making process. Past experiences act in a fundamental way here, but the past cannot determine the outcome of the process *per se*: expectations of the future play a key role in selecting actionable decisions from the available set.

In the social sciences, expectations have taken on different roles and levels of importance in action theory, across the years and across different disciplines. Sociological approaches have traditionally been more interested in understanding the role of the past in explaining present actions than in the role of expected futures. Even when expectations are considered as an essential part of a given course of action, they seem to reflect something that has already happened in the past. Schütz (1962), for instance, devotes particular attention to the role of expectations in his theory of action: expected typicality of the events informs the course of action. However, typicality remains a concept anchored in the past and cannot account for the role of expectations and individual agency in social reality.² On the other side, expectations of future gain, or utility, play a key role in economists’ accounts of economic dynamics. In mainstream economics, the possibility of an expected long-term equilibrium in the markets is connected to the capacity of individuals to forecast successfully and to make investments and consumptions in the light of this predicted future.

In our Narrative Framework, let us imagine a hypothetical young woman in her late twenties, one who has completed her education. Supported by her social and cultural environment, which promotes a two-children norm, she might expect a future family with children. This family expectation, however, clashes with her economic expectations: she thinks she will never get a permanent contract, at least not in the near future; moreover, she is concerned about possible difficulties in reconciling work and family. This example suggests how expectations are embodied in the currently available set of actions and influence the decision-making process, until a fertility intention is formulated. Regardless of their truthfulness, rationality or plausibility, expectations are real, and able to guide the fertility decision-making process. Expectations shape an *expected* future, but human agency may deviate from the expected course of action toward an *imagined* future.

²The role of future expectations has also been considered in sociological approaches relying on some forms of Rational Action Theory, such as in the field of social stratification and inequality (Goldthorpe 2007), as well as in the stream of research focusing on the educational aspirations of immigrants and their descendants (Kao and Tienda 1995).

3.5.3 *Imaginaries*

Imagination is the capacity to place oneself in one or more imagined situations, hypothesizing their effects. But also, and more radically, it means the capacity to imagine a wishful future that cannot be deduced from the present. Imaginaries are imagined futures that join together elements of the present with some normative value orientations; they can be related to collective outcomes (e.g., an egalitarian or a carbon-free society) but also to individual goals (e.g., a family with many children or living in a house with a pool). Fertility decisions are often connected with a family imaginary that may be seen either as being wishful (e.g., because of the parenthood experience) or as being frightening (e.g., because of the reduction in free time).

Importantly, imaginaries can themselves be a cause of uncertain futures because they make people deviate from the expected future. They also represent an important tool to cope with uncertainty: imaginaries allow actors to move beyond inherited thought-patterns and categories; to invent entirely novel ideas; to spot emerging patterns; to choose between visualized but counterfactual options (Bronk 2009). Imaginaries help to de-routinize the course of action by replacing routines with action models characterized by a higher level of consciousness and reflexivity.

Continuing with our previous example, in the imagined future our hypothetical young woman sees herself married with two children in an owner occupied home, close to her parents who may help her. Possibly she has a permanent job contract.

3.5.4 *Narratives*

The gap between imaginaries and the present course of action is filled by narratives.³ When imaginaries are associated with a hypothetical course of action, they constitute a *narrative of the future*. The interplay between structural constraints and agency can be disentangled through the study of narratives that, especially for long-term decisions, provide a goal and show how it can be reached with specific elements, actions, and limitations. In this sense, a narrative of the future subsumes structural constraints, expectations, and imaginaries. Narratives of the future perform four functions: (i) they select the key elements of the story and avoid what is considered irrelevant for the events at stake (*selection*); (ii) they interpret their value and meaning (*interpretation*); (iii) they connect the elements in temporal order identifying the *causes* and *effects* of the action (*causal modelling*); and iv) they support the action rationally and emotionally (*action support*) (Fig. 3.2).

The *selection* process refers to a basic cognitive function. During social action, actors can only focus attention on a small number of elements. For example, what

³There are different meanings of *narratives* across different disciplines, and a review of the use of the term is far beyond the scope of this chapter (for an introduction, see Emirbayer and Mische 1998).

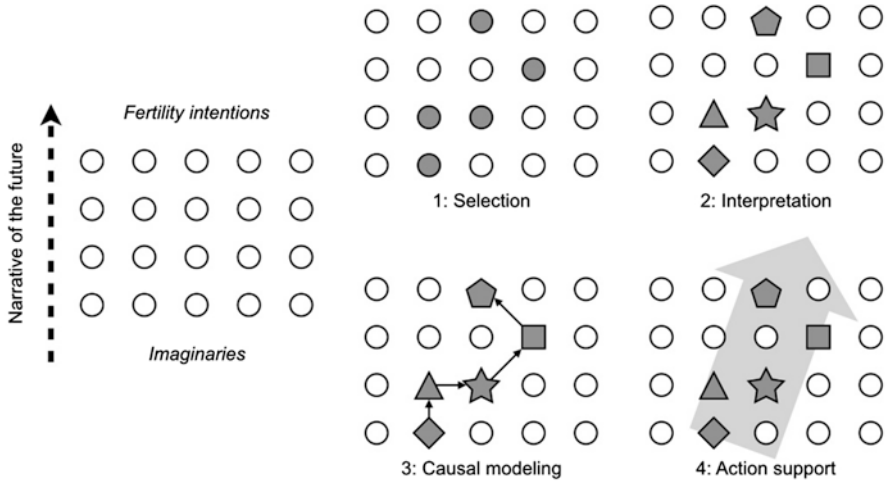


Fig. 3.2 From imaginaries to fertility intentions: the four functions performed by a narrative of the future

matters most in the conscious deliberation of a fertility decision between personal and partner’s labor contracts, household income and savings, housing condition, public services or peers’ and parents’ opinions is not obvious. Relevant information for the decision process is selected—consciously or unconsciously—from an almost infinite possible set. In any given moment, social action can consider only a limited set of elements and information, both because of cognitive limitations and because of the risk of inaction due to excess information. The zone of attention contains both preconscious elements, given by the *habitus*, as well as innovative elements, given by the capacity of imagination.

The *interpretation* process of the selected elements consists of two main phases: typification and classification. The first step of an actor in interacting with a new element of the context is the recognition of the new element’s analogies with things already experienced, namely *typification* (Schütz 1967). The second step is to classify the selected elements. For example, after the selection of the stability of labor contract as a key element in the fertility decision-making process, the next step would be to assess to what extent the current contract can be considered as being stable. The classification process often follows a matrix of binary oppositions (Lévi-Strauss 1963) (e.g., stable/precarious, enough/not enough, short-term/long-term), but it may also involve a more complex system of relationships (e.g., economic sectors). Lines of separation may be nuanced and the classification of elements may not be easy, especially in long-term decisions where there is fundamental uncertainty. The classification process always happens in the light of specific imaginaries. While imaginaries may remain in the background in a decision-making process with clear alternative outcomes, in the case of a decision involving fundamental uncertainty, a narrative of the future tries to align the selected elements in the direction of the imagined future. For example, while in many cases unemployment is considered as

a deterrent to parenthood, its expected negative influence on plans for parenthood may be overlooked when there is an imagined wished-for future involving a child.

The definition of the necessary conditions for reaching the goal (e.g., a family with children) implies a causal path involving the indispensable elements to achieve the imaginary (e.g., a stable job is necessary to save money and to rent a house with n bedrooms and *thus* to plan childbearing). The process of setting the necessary conditions and elements for reaching the goal is the *causal modelling* function of the narratives of the future. Thanks to the capacity of the imagination, people may consider alternative combinations of elements or means–end sequences.

Narratives reflect the interplay between individual agency and structural constraints in a given context. Narratives help people to coordinate their social action in a condition of uncertainty, and allow for the construction of everyday meanings and their implicit causal mechanisms (Bruner 1990). The connection between the social elements of the past, present and future through causal mechanisms also sustains the emotional commitment of individuals to act despite or according to the uncertainty they face (the *action support* function of narratives).

All in all, narratives provide reasons for action. Irrespective of the extent to which these narratives may be false or the actions questionable, they have the power to reduce world complexity (selection process). Narratives make a given environment more intelligible and actionable (thanks to interpretation and causal modeling) and support the ongoing efforts of dealing with uncertainty (action support). Importantly, the more the decision to be taken has important, long-term effects, as in the case of fertility, the more a conscious narrative of the future is needed to help with selection, interpretation, causal modeling and to support the action. To conclude the example introduced in the previous Sections, our young woman could assign a prevailing importance to the pre-conditions considered as necessary to start a family and under which children should be raised (e.g., property ownership and a good income). In a first phase this leads our young woman to postpone childbearing in order to achieve economic stability. Then, while keeping faith with her two-children fertility ideal, approaching her mid-thirties she might consider having only one child as a way to adhere at least partially to her imagined future.

Personal narratives of the future are not only a matter of psychological attitudes or individual intentionality, but they are also the place where the social context (structural constraints) takes an intelligible form and provide elements and reasons for action. They are the hinge that keeps the link between individual and society, favoring their mutual influence and interdependence and, at the same time, allowing for a separate accounting of both sides. Personal narratives will never be totally socialized, nor can they ever be totally independent of context. Hence, personal *narratives of the future* are anchored in existing cultural and institutional frames, as well as public images produced by the media and other powerful opinion formers. Based on socially-constructed perceptions, people build their personal narratives of the future to act according to or in spite of uncertainty, irrespective of structural constraints and their subjective perceptions. The *building blocks* of personal narratives are thus *shared narratives* produced by several agents of socialization, such as parents, peers and the media (Vignoli et al. 2020a). Through the analysis of

narratives and their building blocks the researcher can find hints to put together the causal explanatory chain of fertility, which is under construction.

3.6 The Causal Power of Narratives

We posit that in an era of amplified and pervasive uncertainty the role of narratives of the future gain importance in facilitating or inhibiting fertility decisions irrespective of—objective and subjective—structural constraints. The Narrative Framework, however, shares together with other explanatory models of social action the two main problems of nomological explanations described by Davidson: namely specific causality and generic causality problems (Davidson 1980 [1976]). First, the narrative explanation is not backed up by a general law able to explain all similar actions under the same law (specific causality problem): another mental status may cause the same action. Second, the narrative explanation cannot state what is the final cause of the phenomenon observed (the generic causality problem): another level in the causal chain may represent a deeper level in causal explanation, for example, hormones or neurological connections.

Narratives may actually be invoked as a way of dealing with the specific causality problem, contributing to “choosing among various plausible interpretations of an action in terms of possible reasons” (Stueber 2008: 42). Notwithstanding the fact that different (pre or post) rationalizations of fertility decision will always be possible, narratives attribute reason(s) to the action. Using the words of Uebel (2012: 43–44), narratives “deepen the causal claim by spelling out the context of the attributed reason, embedded in a personal and social history”. In this sense, a personal narrative may be able to explain the intention to have a child, although this does not necessarily impede alternative narratives in the mind of another person with the same constraints. For example, the question of whether the increase in objective economic uncertainty may inhibit fertility intentions (Busetta et al. 2019), or rather facilitates them (consistently with the uncertainty reduction framework; Friedman et al. 1994) cannot be solved under a generic law. Only in the light of a narrative of the future, do the objective indicators of economic uncertainty find their proper role (selection) and value (interpretation) in relation to fertility intentions (causal modeling), providing individuals with sufficient levels of commitment to allow for action (action support).

As stated, the causal chain may always have one more *deep* level, internal or external to individuals, to be used as the *final* causal reason to act (Freese 2009). The concept of *mechanism* helps in framing the limits of the causal chain in the social sciences, and, particularly, in the Narrative Framework. An explanation based on social mechanisms does not aspire to set up the final cause over the observed event; instead, it seeks to explain how the action is *brought about* and under which conditions it can take place (Hedström 2005). Whereas this aim is shared by numerous explanatory models, the added value of the mechanisms approach is to describe the

elements of a *continuous* and *contiguous* causal chain (Hedström and Swedberg 1998; Hedström and Bearman 2009) leading to fertility decisions.

The claim for the continuity and contiguity of causes of the decision-making process allows for a shift in the focus from the final cause to the plausibility of this cause in the light of the whole action chain under consideration. In this sense, the economic uncertainty that permeates contemporary globalized societies may be seen only with difficulty as the final cause of a fertility decision. However, it may affect the action chain. A concrete example may, once again, prove useful. Given unsatisfactory housing conditions for a couple, the degree of expected uncertainty in a partners' future labor condition and income may play a crucial role in the formulation of the intention to have or to not have a child. After all, these labor uncertainties sustain a narrative of the future in which it seems impossible to improve housing conditions. In this case, economic uncertainty may not be the final cause (the generic causality problem remains unsolved). But it leads to the decision because it highlights that the negative housing condition cannot be changed (causal chain continuity) and this defines the couple's narrative of the future (the specific causality problem is addressed).

Not all the actions are taken under conscious deliberation and through the evocation of narratives. In daily life, routine prevails and imitation may play a central role in guiding actions without the need for narratives, or intentions or motivations. In these cases, narratives can be seen as an *ex-post* justification of a previous course of action without any specific claim for causality and any *reason* for the action. Nonetheless, the fertility decision is life-changing and is intimately matched with a narrative of future parenthood, irrespective of how simplistic or infeasible this future may appear to an external observer (Todd et al. 2013). On the one hand, narratives help individuals in selecting the relevant information from a given context, its interpretation and causal modeling. On the other hand, narratives provide crucial information to the researcher on what elements need to be considered to be relevant in a fertility choice. The researcher is, thus, helped in embedding the proposed explanation of the fertility intention in the social reality experienced by the actors.

3.7 Research Examples

The proposed Narrative Framework might offer a powerful approach to frame and operationalize the role of uncertainty in the fertility decision-making process. This is a novel approach in fertility research, making it hard to cite studies that successfully applied said framework. Nonetheless, the literature offers evidence that, on top of the actual economic outlook or objective insecurity, the perception of one's own economic situation, or anticipation of future downturns inhibits childbearing. Some studies use direct questions to respondents about how insecure they feel their own economic situation (Bhaumik and Nugent 2011; Kreyenfeld 2009) or how insecure they feel their jobs to be (Bernardi et al. 2008; Hanappi et al. 2017). The level of subjective well-being has been employed to capture unobserved amenities

of the job, such as prestige, infrastructure, or welfare provisions in the study of fertility intentions (Vignoli et al. 2020b). Other studies use survey questions about respondents' knowledge about possible future events (Trinitapoli and Yeatman 2011). Liefbroer (2005), employing a five-wave panel survey among young Dutch adults spanning 13 years, found that the timing of entry into motherhood is affected by anticipated costs to one's career and to one's level of individual autonomy, and by an anticipated increase in one's sense of security. He also illustrated that anticipated costs to one's career and spending power, and anticipated rewards in terms of one's sense of security and quality of the partner relationship affect the timing of entry into fatherhood. In the following, we present two more studies where the importance of uncertain futures is explicitly considered.

The understanding of the complex interplay between the agency capacity and the structural constraints is at the core of recent developments in family research (Johnson-Hanks et al. 2011; Huinink et al. 2015). For instance, the qualitative research of Bernardi et al. (2008) studied the different roles played by an *insecure* job on fertility choices in what were once East and Western Germany after reunification. The authors sustain that parents brought up in different cultural contexts (communist and capitalist) were socialized to different values and cultural frameworks. This circumstance has consequences for the role that labor insecurity may play in fertility decision. Their conclusion was that *socialization* and *cultural values* play a crucial role in shaping imaginaries about the *right* job for having a child: in the West, fertility is usually postponed until after reaching career goals, whereas in the East childbearing and professional life represent parallel paths. While this explanation of the emergence of a life course narrative may account for the specific case under study, different contexts may see different generative mechanisms of narratives and elements at work (i.e., shared narratives of media and peers). In addition, cultural values and cognitive frameworks may remain valid during a long period and influence expectations, imaginaries and narratives. But, equally, they may sharply change and support a new life course narrative.

Alternatively, a recent article by Gatta et al. (2019) proposed an operationalization of two dimensions of perceived employment uncertainty—stability and resilience—and tested their relevance for predicting fertility intentions, net of socio-economic structural constraints. To this end, they relied on a unique survey that covers an array of variables measuring employment uncertainty *vis á vis* respondents' fertility intentions, the Trustlab survey for Italy (Aassve et al. 2018). Perceived resilience to job loss seems of particular relevance in fertility planning, outperforming objective indicators of employment status and characteristics. The observed significance and strength of association between perceived employment resilience and fertility intentions remains strong after the introduction of person-specific controls for individuals' risk attitudes in the model equation. In addition, the effect of perceived resilience to job loss did not vary significantly in regions with a higher share of fixed-term contracts or higher unemployment rates. In sum, the study by Gatta et al. (2019) advanced the importance of considering how different expectations of the future influence fertility intentions, net of the actual individual-level

employment circumstances, person-specific heterogeneity in risk attitudes, and taking into account the moderating role of the macroeconomic context.

These research examples highlight how expectations, imagination, and the ability to devise different scenarios may play a major role in planning the future.

3.8 Conclusions

We argued that narratives of the future constitute a crucial element in the fertility decision-making process. In a condition of fundamental uncertainty, the future is not *ergodic* or merely the *statistical shadow of the past* (Davidson 2010: 17) and, as such, subject only to random changes (Beckert and Bronk 2018). A major shortcoming in the application of the traditional fertility frameworks is connected to backwards reasoning (Johnson-Hanks et al. 2011): indicators and statistical models consider what already happened in life, without taking into account the sources of uncertainty of the expected future. At the micro-level, actors are always in a present condition where the past already took place—often independently of the actors' wishes—and the future is yet to come in a specific form. Hence, planning a present action means aligning elements of the past in the light of an expected or imagined future.

There is no doubt that understanding historical trajectories is indispensable to understanding the social phenomena of the present. However, events in the social world cannot be explained by the past alone. Actors' decisions are determined by more than existing structures and past experiences—they are shaped in equal measure by perceptions of the future (Beckert 2016: 35).

The action under uncertain conditions requires narratives of the future capable to reduce uncertainty and sustain commitment because outcomes are not necessarily “implied in the present” (Buchanan and Vanberg 1991: 170). Individuals who are uncertain about their future income or earning opportunities may shy away from long-term commitments and, thus, postpone leaving the parental home, setting up their own household, and having children. The fundamental uncertainty in fertility decisions, reinforced during globalization, makes narratives of the future pivotal in generating a level of commitment sufficient enough to act:

Narratives create experienced rather than just abstract ‘knowledge’: they provide support for action founded on an emotionally coloured and subjective feeling of ‘knowing’ what will happen (Tuckett 2018: 74).

We believe that the Narrative Framework will help to understand contemporary fertility dynamics. We do not advocate that perceived economic uncertainty is the only factor responsible for the fertility decline observed in recent years across Europe and the US. However, analyses that simultaneously include numerous objective indicators such as the unemployment rate, the cost of public debt and consumer confidence index, do not entirely explain the decline in birth rates in Europe and the US, 2008–2013 (Comolli 2017; Matysiak et al. 2020). Moreover, value change can

of course be an additional factor contributing to fertility decline, but this is most likely to be a long-term trend, which is unlikely to be so concentrated in the aftermath of the Great Recession. Here, we argue that part of this unexplained fertility decline can be clarified by the rise of uncertainty, a condition in which the future cannot be deduced from present information. Narratives of the future are contingent tools to cope with the uncertainty that people face: they are not just a mirror of the socialization period, but they are always shaped by contingent external forces that may accomplish or thwart the established and expected life course. Indeed, narratives allow people to act according to the uncertainty they face (e.g. avoiding having children) or despite uncertainty (e.g. trying to have children).

We conclude that the study of fertility decisions cannot disregard the condition of uncertainty in which they are taken and, especially, its future-oriented nature. The increasing uncertainty of a given prospect does not imply more unintelligible or chaotic behavior. Rather, the role of uncertainty in the fertility decision-making process can be assessed. Subjective reasoning and decision-making processes often rely on what people *expect* will happen, or what they are trying to achieve, and this became more important in the era of globalization-induced uncertainty. The Narratives Framework contributes to the study of the decision-making process in a condition of uncertainty, allowing the researcher to assess whether, to what extent, and what elements of an uncertain context influence the fertility decision. We wish that future research will operationalize the Narrative Framework, testing its components in connection with fertility, while disentangling the effects of uncertainty from other factors.

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References

- Aassve, A., Mencarini, L., Chiocchio, F., Gandolfi, F., Gatta, A., & Mattioli, F. (2018). Trustlab Italy: A new dataset dataset for the study of trust, family demography and personality. Dondena Working Papers 115, Bocconi University.
- Ajzen, I. (1991). The theory of planned behaviour. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211.
- Ajzen, I., & Klobas, J. (2013). Fertility intentions: An approach based on the theory of planned behaviour. *Demographic Research*, 29(8), 203–232.
- Alderotti, G., Vignoli, D., Baccini, M., & Matysiak, A. (2019). *Employment uncertainty and fertility: A network meta-analysis of European research findings* (DiSIA Working Papers 2019/06), University of Florence.
- Becker, G. S. (1964). *Human capital*. New York: Columbia University Press.
- Becker, G. S. (1981). *A treatise on the family*. Cambridge, MA: Harvard University Press.
- Beckert, J. (2016). *Imagined futures. Fictional expectations and capitalist dynamics*. Cambridge: Harvard University Press.

- Beckert, J., & Bronk, R. (2018). An introduction to uncertain futures. In J. Beckert & R. Bronk (Eds.), *Uncertain futures: Imaginaries, narratives, and calculation in the economy* (pp. 1–36). Oxford: Oxford University Press.
- Bernardi, L., Klärner, A., & von der Lippe, H. (2008). Job insecurity and the timing of parenthood: A comparison between eastern and Western Germany. *European Journal of Population*, 24(3), 287–313.
- Bernardi, L., Hiunink, J., & Settersten, R. A. (2019). The life course cube: A tool for studying lives. *Advances in Life Course Research*, 41, 100258.
- Bhaumik, S. K., & Nugent, J. B. (2011). Real options and demographic decisions: Empirical evidence from east and West Germany. *Applied Economics*, 43(21), 2739–2749.
- Boomgaarden, H. G., van Spanje, J., Vliegenthart, R., & de Vreese, C. H. (2011). Covering the crisis: Media coverage of the economic crisis and citizens' economic expectations. *Acta Politica*, 46, 353–379.
- Bourdieu, P. (1990) [1980]. *The logic of practice*. Stanford: Stanford University Press.
- Bronk, R. (2009). *The romantic economist: Imagination in economics*. Cambridge: Cambridge University Press.
- Bruner, J. (1990). *Acts of meaning*. Cambridge, MA: Harvard University Press.
- Buchanan, J. M., & Vanberg, V. J. (1991). The market as a creative process. *Economics & Philosophy*, 7, 167–186.
- Busetta, A., Mendola, D., & Vignoli, D. (2019). Persistent joblessness and fertility intentions. *Demographic Research*, 40(8), 185–218.
- Caldwell, J. (1982). Theory of fertility decline. In *London*. New York: Academic.
- Cepernich, C. (2012). Storie di subprime, downgrading, spread e default. La narrazione della grande crisi tra informazione e popolarizzazione. *Comunicazione Politica*, 3, 409–440.
- Comolli, C. L. (2017). The fertility response to the great recession in Europe and the United States: Structural economic conditions and perceived economic uncertainty. *Demographic Research*, 36(51), 1549–1600.
- Comolli, C. L., Neyer, G., Andersson, G., Dommermuth, L., Fallesen, P., Jalovaara, M., Jónsson, A., Kolk, M., & Lappegård, T. (2019). Beyond the economic gaze: Childbearing during and after recessions in the Nordic countries. *Stockholm Research Reports in Demography*, 16.
- Dantis, C., & Rizzi, E. L. (2020). Transition to first birth during the Great Recession: the case of Greece. *Genus*, 76(1), <https://doi.org/10.1186/s41118-019-0070-1>.
- Davidson, D. (1980). [1976]. Hempel on explaining action. In D. Davidson (Ed.), *Essays on actions and events* (pp. 261–276). Oxford: Clarendon Press.
- Davidson, P. (1996). Reality and economic theory. *Journal of Post Keynesian Economics*, 18(4), 479–508.
- Davidson, P. (2010). Risk and uncertainty. In R. Skidelsky & C. W. Wigström (Eds.), *The economic crisis and the state of economics* (pp. 13–29). New York: Palgrave Macmillan.
- Davis Cross, M. K., & Ma, X. (2013). EU crises and the international media. In *ARENA working papers 3/2013*, Center for European Studies. Oslo: University of.
- Dequech, D. (2000). Fundamental uncertainty and ambiguity. *Eastern Economic Journal*, 26(1), 41–60.
- Elster, J. (2009). Excessive ambitions. *Capitalism and Society*, 4(2), 1–30.
- Emirbayer, M., & Mische, A. (1998). What is agency? *American Journal of Sociology*, 103(4), 962–1023.
- Esping-Andersen, G., & Billari, F. C. (2015). Re-theorizing family demographics. *Population and Development Review*, 41(1), 1–31.
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Boston: Addison-Wesley.
- Freese, J. (2009). Preferences and the explanation of social behavior. In P. Bearman & P. Hedström (Eds.), *Oxford handbook of analytic sociology* (pp. 94–114). Oxford: Oxford University Press.
- Friedman, D., Hechter, M., & Kanazawa, S. (1994). A theory of the value of children. *Demography*, 31(3), 375–401.

- Gatta, A., Mattioli, F., Mencarini, L., & Vignoli, D. (2019). *Employment uncertainty and fertility intentions: Stability or resilience?* (DiSIA working papers 2019/12), University of Florence.
- Goldscheider, F., Bernhardt, E., & Lappegård, T. (2015). The gender revolution: A framework for understanding changing family and demographic behavior. *Population and Development Review*, 41(2), 207–239.
- Goldthorpe, J. H. (2007). On sociology, second edition. In *Volume one: Critique and program*. Stanford: Stanford University Press.
- Guetto, R., & Panichella, N. (2013). Geographical mobility and reproductive choices of Italian men. *European Sociological Review*, 29(2), 302–315.
- Guetto, R., Luijckx, R., & Scherer, S. (2015). Religiosity, gender attitudes and women's labour market participation and fertility decisions in Europe. *Acta Sociologica*, 58(2), 155–172.
- Hacker, J. S. (2019). *The great risk shift: The new economic insecurity and the decline of the American dream*. New York: Oxford University Press.
- Hanappi, D., Ryser, V. A., Bernardi, L., & Le Goff, J. M. (2017). Changes in employment uncertainty and the fertility intention–realization link: An analysis based on the Swiss household panel. *European Journal of Population*, 33(3), 381–407.
- Hedström, P. (2005). *Dissecting the social*. Cambridge: Cambridge University Press.
- Hedström, P., & Bearman, P. (Eds.). (2009). *The Oxford handbook of analytical sociology*. Oxford: Oxford University Press.
- Hedström, P., & Swedberg, R. (1998). *Social mechanisms: An analytical approach to social theory*. Cambridge: Cambridge University Press.
- Hofmann, B., & Hohmeyer, K. (2013). Perceived economic uncertainty and fertility: Evidence from a labor market reform. *Journal of Marriage and Family*, 75(2), 503–521.
- Huinink, J., Kohli, M., & Ehrhardt, J. (2015). Explaining fertility: The potential for integrative approaches: Introduction to the special collection 'theoretical foundations of the analysis of fertility'. *Demographic Research*, 33(4), 93–112.
- Johnson-Hanks, J. A., Bachrach, C. A., Morgan, S. P., & Kohler, H.-P. (2011). *Understanding family change and variation: Toward a theory of conjunctural action*. New York: Springer.
- Kao, G., & Tienda, M. (1995). Optimism and achievement: The educational performance of immigrant youth. *Social Science Quarterly*, 76(1), 1–19.
- Karaman Örsal, D. D., & Goldstein, J. R. (2018). The changing relationship between unemployment and total fertility. *Population Studies*, 72(1), 109–121.
- Knight, F.H. (2006) [1921]. *Risk, uncertainty and profit*. New York: Cosimo Classics.
- Kreyenfeld, M. (2009). Uncertainties in female employment careers and the postponement of parenthood in Germany. *European Sociological Review*, 26(3), 351–366.
- Kreyenfeld, M. (2016). Economic uncertainty and fertility. In K. Hank & M. Kreyenfeld (Eds.), *Social Demography Forschung an der Schnittstelle von Soziologie und Demografie* (pp. 59–80). Wiesbaden: Springer VS.
- Kulu, H. (2005). Migration and fertility: Competing hypotheses re-examined. *European Journal of Population*, 21(1), 51–87.
- Lane, D., & Maxfield, R. (2005). Ontological uncertainty and innovation. *Journal of Evolutionary Economics*, 15(1), 3–50.
- Lesthaeghe, R. (1995). The second demographic transition in Western countries: An interpretation. Gender and family change in industrialized countries. In K. O. Mason & A. Jensen (Eds.), *Gender and family change in industrialized countries* (pp. 17–62). Oxford: Clarendon Press.
- Lévi-Strauss, C. (1963). *Structural anthropology*. New York: Basic Books.
- Liefbroer, A. C. (2005). The impact of perceived costs and rewards of childbearing on entry into parenthood: Evidence from a panel study. *European Journal of Population*, 21(4), 367–391.
- Matysiak, A., & Vignoli, D. (2008). Fertility and women's employment: A meta-analysis. *European Journal of Population*, 24(4), 363–384.
- Matysiak, A., & Vignoli, D. (2013). Diverse effects of women's employment on fertility: Insights from Italy and Poland. *European Journal of Population*, 29(3), 273–302.

- Matysiak, A., Sobotka, T., & Vignoli, D. (2020). The great recession and fertility in Europe: A sub-national analysis. *European Journal of Population*, online first.
- McDonald, P. (2000). Gender equity in theories of fertility transition. *Population and Development Review*, 26(3), 427–439.
- Mencarini, L., Vignoli, D., & Gottard, A. (2015). Fertility intentions and outcomes: Implementing the theory of planned behavior with graphical models. *Advance in Life Course Research*, 23, 14–28.
- Mills, M., & Blossfeld, H. P. (2013). The second demographic transition meets globalization: A comprehensive theory to understand changes in family formation in an era of rising uncertainty. In A. R. Evans & J. Baxter (Eds.), *Negotiating the life course: stability and change in life pathways* (pp. 9–33). London: Springer.
- Myrskylä, M., Kohler, H.-P., & Billari, F. C. (2009). Advances in development reverse fertility declines. *Nature*, 460, 741–743.
- OECD. (2011). *Divided we stand: Why inequality keeps rising*. OECD Publishing. <https://doi.org/10.1787/9789264119536-en>. Accessed 18 Feb 2020.
- Offe, C. (1998). Political economy: Sociological perspectives. In R. E. Goodin & H. D. Klingemann (Eds.), *A new handbook of political science* (pp. 675–690). Oxford: Oxford University Press.
- Ranjan, P. (1999). Fertility behaviour under income uncertainty. *European Journal of Population*, 15(1), 25–43.
- Régnier-Loilier, A., & Vignoli, D. (2011). Intentions de fécondité et obstacles à leur réalisation en France et en Italie. *Population*, 66(2), 401–431.
- Schoen, R. (2010). Gender competition and family change. *Genus*, 66(3), 95–120.
- Schoen, R., Kim, Y. J., Nathanson, C. A., Fields, J., & Astone, N. M. (1997). Why do Americans want children? *Population and Development Review*, 23(2), 333–358.
- Schoen, R., Astone, N. M., Kim, Y. J., Nathanson, C. A., & Fields, J. M. (1999). Do fertility intentions affect fertility behavior? *Journal of Marriage & Family*, 61(3), 790–799.
- Schütz, A. (1962). *The problem of social reality. Collected papers I*. The Hague: Martinus Nijhoff.
- Schütz, A. (1967). *The phenomenology of the social world*. Evanston: Northwestern University Press.
- Strandbakken, P. (2017). The study of consumption in sociology. Beyond utility theory. In H. Leiulforsrud & P. Sohlberg (Eds.), *Concepts in action* (pp. 136–150). Leiden: Studies in critical Science.
- Stueber, K. R. (2008). Reasons, generalizations, empathy, and narratives: The epistemic structure of action explanation. *History and Theory*, 47(1), 31–43.
- Thomson, E., & Brandreth, Y. (1995). Measuring fertility demand. *Demography*, 32(1), 81–96.
- Todd, P., Hills, T., & Hendrickson, A. (2013). Modeling reproductive decisions with simple heuristics. *Demographic Research*, 29(24), 641–662.
- Trinitapoli, J., & Yeatman, S. (2011). Uncertainty and fertility in a generalized AIDS epidemic. *American Sociological Review*, 76(6), 935–954.
- Tuckett, D. (2018). Conviction narrative theory and understanding decision-making in economics and finance. In J. Beckert & R. Bronk (Eds.), *Uncertain futures: Imaginaries, narratives, and calculation in the economy* (pp. 62–82). Oxford: Oxford University Press.
- Tuckett, D., & Nikolic, M. (2017). The role of conviction and narrative in decision-making under radical uncertainty. *Theory & Psychology*, 27(4), 501–523.
- Uebel, T. (2012). Narratives and action explanation. *Philosophy of the Social Sciences*, 42(1), 31–67.
- van de Kaa, D. J. (1987). Europe's second demographic transition. *Population Bulletin*, 42(1), 1–59.
- Vignoli, D., Drefahl, S., & De Santis, G. (2012). Whose job instability affects the likelihood of becoming a parent in Italy? A tale of two partners. *Demographic Research*, 26(2), 41–62.
- Vignoli, D., Tocchioni, V., & Mattei, A. (2019). The impact of job uncertainty on first-birth postponement. *Advances in Life Course Research*, online first.
- Vignoli, D., Guetto, R., Bazzani, G., Minello, A., & Pirani, E. (2020a). Economic uncertainty and fertility: Narratives of the future. In *DiSIA working papers 2020/1*. Florence: University of.
- Vignoli, D., Mencarini, L., & Alderotti, G. (2020b). Is the effect of job uncertainty on fertility intentions channeled by subjective well-being? *Advances in Life Course Research*, 100343.

- Weber, M. (1978 [1922]). *Economy and society: An outline of interpretive sociology*. Berkeley: University of California Press.
- Westoff, C. F., & Ryder, N. B. (1977). The predictive validity of reproductive intentions. *Demography*, 14(4), 431–453.

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