

## PERSPECTIVE REVIEW

## Childlessness: A review of the theoretical frameworks and a proposition of general pathways

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## Abstract

The literature on childlessness has received increasing prominence in demographic studies because, with increasing levels of childlessness, it helps the understanding of important demographic concerns, such as reproductive behavior, family formation, and gender relations. Although a growing number of empirical studies on low fertility have been discussing childlessness, less research has attempted to discuss it from a theoretical perspective. This work has, therefore, the objective of debating theoretically important and recurrent issues in the literature on childlessness. This general aim is divided into three specific objectives: First, to discuss a range of contexts, aspects, and theoretical approaches that explain childlessness, second, to document the association between childlessness and important sociodemographic variables, and third, to develop a proposition of general pathways to childlessness. This study shows that several socioeconomic factors together with important correlated theories help to explain increasing childlessness. It also documents how childlessness is especially related to higher levels of education, singlehood, being African descents, living in urban areas, and having no religious affiliation. This work also finds and discusses four general pathways to childlessness in the proposed framework. This study contributes to the development of the theoretical framework on childlessness and encourages further research into this topic.

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## 1. Introduction

The study of childlessness has gained greater relevance in demographic analyses due to its increasing levels (Hayford, 2013; Leocádio *et al.*, 2022; Reher & Requena, 2018; Tanturri *et al.*, 2015). Historically, a U-shaped curve has characterized childlessness in developed countries. After reaching high levels (15 – 25%) at the turn of the nineteenth century, it decreased around the middle of the 20<sup>th</sup> century and increased again after the 1960s (Festy, 1980; Poston & Trent, 1982; Rowland, 1998; Sobotka, 2017). Some studies show recent high levels of childlessness also in developing countries with low fertility (Cavenaghi & Alves, 2013; Leocádio *et al.*, 2022; Pardo *et al.*, 2020; Rosero-Bixby *et al.*, 2009). As it is an important and increasingly frequent feature of these low-fertility societies (characterized as fertility below the replacement level (OECD, 2016; United Nations, 2003)), a further comprehension of childlessness (characterized as an

non-event, that is, no biological child (Houseknecht, 1987) helps to understand better reproductive behavior and the correlated consequences in family formation and gender relations (Billari *et al.*, 2009; Hayford, 2013; Sobotka & Beaujouan, 2014; Sobotka & Testa, 2008).

Part of the literature on childlessness presents the topic through a broad discussion that focuses on low fertility and new family patterns (Sobotka, 2004; Sobotka & Testa, 2008); other studies focus on empirical analyses of childlessness and its trends (Hayford, 2013; Leocádio *et al.*, 2022; Reher & Requena, 2018). Fewer in number are those that discuss the topic through a theoretical approach (Agrillo & Nelini, 2008; Kreyenfeld & Konietzka, 2017; Tanturri *et al.*, 2015). Complementing this still incipient type of analysis (theoretical discussions), this work aims to debate, through an analytical approach, some important and (most) recurrent issues in the literature that deal somehow with childlessness. Although it does not seek to exhaust the whole literature, to assess this general aim, this study has the following specific objectives: 1) discussing different contexts, aspects, and theoretical frameworks that help explain childlessness; 2) discussing the association between childlessness and important (and recurrent in literature) sociodemographic variables; and 3) proposing a general framework of pathways to childlessness, developed from the discussion of the main types of childlessness. In this vein, this study contributes to the development of the theoretical framework that discusses childlessness and encourages further research into this topic.

The contextual and geographical focus of this theoretical discussion is on countries with low fertility and higher levels of development, on which there is also greater demographic academic production when it comes to the topics discussed. It is worth mentioning, however, that the proposition of the general pathways to childlessness (third specific objective) can also be applied to contexts of different levels of development. Although it also discusses biological reasons for childlessness, this study focuses particularly on key factors and theoretical frameworks that are correlated to each other and that have a greater appearance in the social and (especially) demographic scientific literature devoted to discussing low fertility and childlessness. Furthermore, this research focuses on women and the reason for this is two-fold. First, the highest share of studies targets women. Second, the proposition of the general framework of pathways to childlessness takes into consideration the restricted women's reproductive period and the temporary versus permanent childlessness distinction.

This work uses literature review as a method, which is a type of review that qualitatively describes and discusses

published materials on the topic analyzed. Although this approach does not explicitly aim to maximize the scope of the discussed main topic and does not include comprehensive searching, it provides an examination of different aspects and enables covering a wide range of subjects (at various levels of completeness and comprehensiveness), which is ultimately the objective of this theoretical work (Grant & Booth, 2009). In addition to this Introduction, Section 2 presents and contextualizes childlessness in low-fertility countries, based on the discussion of its past and current trends. It also discusses important aspects and theoretical approaches that help explain these trends. Section 3 discusses the relationship between childlessness and important sociodemographic variables that are most recurrent in the literature. Section 4 presents, first, the main types and characterizations of childlessness, and, based on them, proposes a framework of general pathways to childlessness. Section 5 concludes the study.

## 2. Contexts, aspects, and theoretical approaches capable of explaining childlessness

### 2.1. Contexts and aspects

Childlessness is a feature increasingly present in low-fertility contexts. The fertility transition changed the patterns of family formation, and the increase in childlessness is an important outcome of this process (Sobotka & Testa, 2008). The share of women who end their reproductive period (women's reproductive period comprises the 15 – 49 age interval (WHO, 2022)) without a child in Italy reaches 25%. In countries such as Germany, Finland, Austria, and the United Kingdom, around one-fifth of cohorts of women born around 1965 are childless. In other countries such as Sweden, Denmark, The Netherlands, Spain, and Greece the percentages range between 15% and 20% (Tanturri *et al.*, 2015). Childlessness is also increasing among cohorts that have not yet completed the reproductive period. And, even if part of these women ends up having children, another share may not be able to fulfill their reproductive plans as a result of a set of factors that involve postponement of fertility, decreasing fecundity, or changes in reproductive intentions (Miettinen & Szalma, 2014).

Regarding the historical childlessness trend, in several European countries, at the end of the 19<sup>th</sup> century and the beginning of the 20<sup>th</sup> century, around 20% of women ended the reproductive period without a child (Kreyenfeld & Konietzka, 2017). This high percentage was due (in part) to the European pattern of marriage (Hajnal, 1965), in which young adults left their parents' homes to work and accumulate capital, which consequently raised the

age of marriage. Considering that total fertility in this period was basically composed of marital fertility, higher levels of childlessness emerged (Kreyenfeld & Konietzka, 2017). Similarly, in the United States, there are estimates that 25% of cohorts born between the end of the 19<sup>th</sup> century and the beginning of the 1920s were childless (Kreyenfeld & Konietzka, 2017). Rowland (1998) argues that childlessness among these cohorts is closely related to the socioeconomic period that characterized the post-Great Depression, from the end of the 1920s. Another factor that may have contributed is the sudden drop in the sex ratio resulting from the Second World War. Thereafter, the cohorts of women born between the late 1930s and the 1940s entered their reproductive period in a period known as the “Golden Age of Marriage,” and childlessness decreased (Festy, 1980). It rose again afterward, especially among cohorts born after the 1960s. Poston & Trent (1982) characterize this childlessness trend as a U-shaped curve, that is, high levels at the beginning of the 20<sup>th</sup> century followed by a fall toward the mid of the century and a subsequent increase to the current high levels.

Some authors understand that social and economic aspects are the most important for the emergence of the current context of increasing levels of childlessness. For example, the wide transformations that took place in the second half of the 20<sup>th</sup> century, when the availability of contraceptive methods and the greater participation of women in the labor market expanded the range of options offered to women, who no longer saw motherhood as a unique or main alternative. In parallel, the educational systems expanded, which also contributed to increasing the levels of empowerment and wages among women (Agrillo & Nelini, 2008; Frejka, 2017; Livingston & Cohn, 2010). On top of that, globalization and digitalization not only accelerated these socioeconomic advances, but also facilitated communication and dissemination of different thinking, ideals, and norms, including those that value, to a greater extent, smaller families and childlessness. Increasing cohabitation and individualization, for instance, are two important outcomes (closely correlated to the Second Demographic Transition discussed in more detail in Subsection 2.2) coming from this context of continuous socioeconomic advances and globalization that contributes to increasing childlessness (Lesthaeghe, 2010; Tanturri *et al.*, 2015; Zaidi & Morgan, 2017).

In addition to these advances, other socioeconomic aspects such as contexts of instability and economic stagnation can also lead to increased levels of childlessness (Frejka, 2017). Furthermore, uncertainty and globalization, for example, can be thought together when it comes to explaining low fertility and childlessness. If globalization, on the one hand, has provided an enlargement of working

options and arrangements, it has also deteriorated labor conditions, enhanced unemployment, and increased inequality, especially among the less skilled (Slaughter & Swagel, 1997). The uncertainty and stability stemming from these processes, particularly in times of economic stagnation, has a negative outcome in fertility, increasing, therefore, childlessness (accordingly, the Uncertainty Theory discusses in Subsection 2.2 some explanations for childlessness).

Other authors discuss these socioeconomic factors that contribute to the increase in childlessness through a closer relationship with fertility postponement. To achieve these advances, such as higher education and consolidation in the labor market, women continually postpone the transition to their first child. As they act in this way, the possibility of indecision in becoming mother increases. That is, initially, women postpone until they achieve a certain goal, but gradually, they can adapt themselves to childlessness, and eventually, no longer be interested in motherhood. In addition to this, it is known that women's fecundity is inversely proportional to age, so fertility postponement can lead to an impossibility of achieving reproductive desires (Miettinen *et al.*, 2015; Nicoletti & Tanturri, 2008; Tanturri *et al.*, 2015). Accordingly, Tocchioni (2018) focuses on the couple's relationship to explain childlessness. Late unions, for example, could again postpone the birth of a first child, and eventually, considering the age of the union together with the decreasing fecundity levels and changes in fertility intentions, a person may end up childless. Another associated element is the interruption of the relationship, which can lead to the dissolution of previously made reproductive plans. Miettinen *et al.* (2015) also emphasize the lack of a partner, considering difficulties in finding a suitable one. Given the strong association between partnership and childbearing (as discussed in Section 3), involuntary singlehood could also lead to childlessness. Finally, the lack of understanding between both parties of the couple regarding the ideal family size is also another important aspect of the increasing childlessness (Miettinen *et al.*, 2015).

Therefore, acting together with different socioeconomic aspects, fertility postponement, as a biological constraint, becomes another important factor in the explanation of childlessness. The quantity and quality of women's eggs diminish with increasing age. Moreover, poor-quality eggs in younger women could also cause childlessness. Additional biological reasons for childlessness (among women) include blocked fallopian tubes, abnormal menstruation, and other medical conditions such as disorders of the ovaries and the endocrine system, and uterine problems (Ford *et al.*, 2000; WHO, 2020). Other risk factors for childlessness are derivative from a mix of

biological, environmental, and socioeconomic factors, for example, stress, smoking, excessive alcohol consumption, and obesity (Gore *et al.*, 2015; Segal & Giudice, 2019).

If this set of factors that includes biological, socioeconomic, and environmental domains works in favor of the increase in childlessness, assisted reproductive technologies (ART), for instance, *in vitro* fertilization (IVF), can work in the opposite direction. These technologies consist of techniques for handling eggs and embryos, and, in general, the procedures involve the surgically removing of eggs from a woman's ovaries, the combination of these with sperm in the laboratory, and the subsequent returning to the woman's body (or donating to another woman) (CDC, 2019). Techniques such as these ones can provide a woman (or a couple) the chance of having a first child. They are, nonetheless, expensive, and, as consequence, reachable by only a small proportion of the population (Crawford *et al.*, 2016). On top of that, given the current rising trend of childlessness, the socioeconomic advances, including the fertility postponement coming from these changes, seem to play a more important role in the scenario of childlessness in low-fertility countries (Tanturri *et al.*, 2015).

## 2.2. Theoretical approaches

In addition to these socioeconomic and biological aspects related to childlessness, some theoretical approaches can also corroborate the explanation of this feature. Although these were not conceived, a priori, with the main purpose of explaining childlessness, they are useful for the debate as they present certain reasoning in which childlessness also fits somehow (Tanturri *et al.*, 2015).

The first of these is the Second Demographic Transition (SDT) (Lesthaeghe, 2010), characterized by: fertility below the replacement level, development of different family arrangements and increasing cohabitation, decoupling of marriage from fertility, increase in the number of divorces, postponement of unions, increased non-marital fertility and the emergence of a greater number of childless women (Lesthaeghe, 2010; Zaidi & Morgan, 2017). The main driver of the SDT is the cultural change that made possible the development of postmodern norms and attitudes, evidencing, especially, individualism. Thus, the SDT understands that the decrease in the power of family-related values and norms is explained by the search for greater individual decision-making power accompanied by an accentuated process of secularization. It focuses on ideational changes, which are the main causes of family loss of importance (Lesthaeghe, 2010; Zaidi & Morgan, 2017). McAllister & Clarke (1998) show evidence of childless women who aspire to independence and freedom, which is directly in line with the STD proposal. Therefore, according to this theory, ideational changes are the main

driving forces of new behaviors and family arrangements, among which childlessness is found (Balbo *et al.*, 2013).

The Preference Theory (Hakim, 2000; 2002), similarly to the Second Demographic Transition, also understands that fertility behavior is defined by personal values and individual preferences. In this vein, factors such as secularization, the emergence of individual aspirations, and the weakening of traditional social and moral norms help women to make their own decisions, including the postponement or denial of childbearing (Tanturri *et al.*, 2015). Hakim (2000; 2002) proposes the distinction of three groups of women, divided according to their preferences regarding family and work. The first group, with a family-oriented bias, has the home environment and children as priorities in life, which make them choose not to work (except for situations of economic emergencies). Women who prioritize their careers make up the second group. They preferentially focus on the work environment, and, on several occasions, may end up remaining single or without children. The third group does not have a single inclination. It is, therefore, composed of women who want to enjoy both work and family. Women tend to be more family or career-oriented according to what they experience at the beginning of the socialization process. Moral and social changes may encourage them to follow their own desires. Thus, the preference for a life without children gradually becomes a more acceptable behavior (Hakim, 2000; 2002; Tanturri *et al.*, 2015).

The two theoretical approaches discussed so far are guided by cultural issues and post-materialist values in this effort to understand female reproductive behavior. Individualism, secularization, and self-fulfillment help individuals more freely assess different courses of action during their life histories, including remaining childless. The next two approaches use economic perspectives. The Rational Choice Theory assumes that couples tend to consider income and personal preferences in the decision to have more or fewer children so that they end up weighing the costs and benefits in a final rational decision. Although according to the economic paradigm, fertility and income are positively associated, this theory argues that couples tend to invest in quality rather than quantity, which leads to a smaller number of children. Even though both quality and quantity have positive elasticity with income, and quantity tends to increase with economic development, the demand for quality is more elastic and increases with greater speed. This context leads to an increase in the price of the child sufficiently enough to reduce the number of children (Becker, 1960; Lee, 2015).

In addition to the quantity-quality trade-off, the Rational Choice Theory discusses the opportunity costs

of having a child. Given that societal advances happened faster and on a larger scale in the labor market than in the private sphere of the household, the cost of time and effort spent on children increased, which resulted in a reduction in women's fertility levels (Becker, 1960; Lee, 2015). It is worth noting that this line of reasoning tends to fit even better among women with higher levels of education, who choose to have fewer children, as the costs of giving up career and labor market opportunities are higher. Thus, childlessness may be a likely consequence of the increasing economic costs of a child that end up outweighing the social-psychological benefits of childbearing (Tanturri *et al.*, 2015).

The Uncertainty Theory, in turn, understands that decision-makers, in this case, couples (or unique individuals), adopt a risk minimization posture whenever the economic, social, and personal context is uncertain. It is possible to highlight three variations of uncertainty that can affect couples' decisions. The first of these variations, and perhaps the most recurrent, is the economic one. Decision makers may understand that they find themselves in a situation where their income earnings are not enough to support a child. Temporal uncertainty, on the other hand, is centered more on the impossibility of engaging in something as complex and enduring as having a child. The third type of uncertainty, which is closely related to the first one, understands that, when employment conditions are somewhat precarious, there is the possibility of opting for the continuous postponement of fertility or its denial (Mills & Blossfeld, 2017; Tanturri *et al.*, 2015).

Among others, gender approaches are also important in the debate about explanations for low fertility, and, consequently, childlessness. According to these theories, very low levels of fertility are a product of the gap between gender equity in the public sphere (education and the labor market) and gender equity in the private sphere (household) (Goldscheider *et al.*, 2015; McDonald, 2000). Moreover, as discussed so far, low levels of fertility are accompanied by high levels of childlessness. According to gender theories, greater equity in the private sphere, that is, greater male participation in performing household tasks would be necessary to increase fertility, which, in theory, would decrease childlessness.

As presented throughout this whole Section (2.1 and 2.2), different social, economic, ideational, cultural, biological and environmental factors contribute (together or alone) to the increase (or decrease) of childlessness. Table 1 summarizes the contexts, aspects, and theoretical approaches discussed in this section with the aim of contributing to the development of a framework focused on explaining childlessness.

**Table 1. Overview of the contexts, aspects, and theoretical approaches discussed that help explain the increasing levels of childlessness**

Contexts and Aspects	Greater availability of contraceptive methods
	Greater involvement of women in the labor market
	Increasing levels of education
	Globalization and digitalization
	Increasing cohabitation
	Increasing individualization
	Economic uncertainty and instability
	Fertility postponement
	Lack of partner
	Biological reasons (together with fertility postponement, and environmental reasons; despite the assisted reproductive technologies that work in the opposite direction)
Theoretical Approaches	Second Demographic Transition
	Preference Theory
	Rational Choice Theory
	Uncertainty Theory
	Gender Equity Theories

Source: Author's own elaboration

### 3. The relationship between childlessness and important sociodemographic variables

This section aims to present the relationship between childlessness and important sociodemographic variables (of greater recurrence in the literature) in low-fertility societies, where the highest levels of childlessness are found, and, therefore, for which there is also greater academic production.

Historically, the relationship between education and childlessness is one that most interests scholars (Burkimsher & Zeman, 2017). Childlessness is often shown to be positively associated with the woman's educational level (Kreyenfeld & Konietzka, 2017), and the main explanations often focus on the individual level. As discussed in Section 2, the Rational Choice Theory argues that opportunity costs are higher for women with higher education. Therefore, it is expected that the increase in the level of education is associated with the increase in childlessness. There is also the argument that women become more economically and personally independent as they devote more time to education (Oppenheimer, 1994). In this sense, women would be less likely to start a partnership, and, as discussed below, marital status is still

the variable with the highest association with childlessness. These explanations also reflect the scenario of the First Demographic Transition, marked by the decrease in fertility (Kreyenfeld & Konietzka, 2017). Another possible explanation for the association between childlessness and education stems from the SDT, already detailed in Section 2. After the first stage of demographic transition, the cultural and normative changes and the expansion of different lifestyles create conditions for levels of childlessness even higher. Finally, the association between childlessness and education can also be related to fertility postponement. Increasing levels of education is equal to a greater share of the reproductive period dedicated to personal training and qualification, which increases the need to postpone the birth of the first child. Since fecundity is inversely associated with the age of the woman, the likelihood of childbearing decreases (Kravdal, 2001).

Präg *et al.* (2016) relate childlessness not only with the level of education but also with female participation in the European labor market. The expansion of education is accompanied by increasing proportions of women in higher positions and with higher wages, which leads to rising levels of childlessness. A positive educational gradient is observed, that is, more educated women are more likely to not experience childbearing. However, there are exceptions. Some countries, such as Finland, for example, have registered a reversal in the educational gradient among some younger birth cohorts, that is, the group of more educated women has a lower chance of not having a child. A hypothesis that tries to explain these exceptions argues that more educated women, in some contexts, are more likely to start family formation processes earlier in life (Präg *et al.*, 2016).

Esteve & Florez-Paredes (2018) reinforce the idea that, through education, women's ideals, expectations, and opportunity costs can be transformed, which leads to a decrease in the desire for large families and an increase in interest in a life without children. Education not only reduces the *quantum* but also delays the *timing*, which ultimately affects levels of childlessness. Still on the relationship with education, the authors also emphasize the importance of adequate knowledge of contraceptive methods for childlessness.

The marital status variable is the one with the strongest association with childlessness (Hayford, 2013; Tanturri *et al.*, 2015). Births also occur outside formal or informal unions, but a stable partnership usually precedes childbearing. Therefore, not having a stable partner, never having been partnered, and being divorced are situations that increase the likelihood to become childlessness. Moreover, although children are traditionally born in formal unions,

cohabitations have increasingly been associated with the birth of a child (Jalovaara & Fasang, 2017). Miettinen *et al.* (2015) enhance the importance of marital status to explain childlessness, considering it more relevant than variables such as education and social status. Keizer *et al.* (2008) show that European women who have never had a stable partner are more likely to remain childless. Despite that, the association between being in a partnership (mainly formal marriage) and childbearing seems to lose strength over the last few decades. Although most children are still born within unions, the reproductive behavior of single women seems to contribute to increasing levels of childlessness (Leocádio *et al.*, 2022).

When it comes to race and ethnicity, Frejka (2017) finds a reversal of the association in the United States. Higher levels of childlessness have been found in cohorts of African American women born between 1883 and 1942. This relationship reaches its peak among the cohorts born in 1924 and 1925 when African American women were 2.4 times more likely to remain childless compared to white women. However, among cohorts born after 1940, childlessness is more likely between white women. Veevers (1979) found similar results, showing that in the past, childlessness used to be higher among African American women, which has been reversed. It is understood that the living conditions of African American women at the beginning of the 20<sup>th</sup> century were much worse compared to white women. This scenario marked by segregation and racial discrimination is described as a possible explanation for the greater association among African American women in the past (Frejka, 2017; Veevers, 1979). And these findings for race are closely linked to the discussion that shows a U-shaped trend for childlessness. The early 20<sup>th</sup> century was characterized by socioeconomic disadvantages (compared to current times), which kept childlessness higher. This period was followed by a period of increasing marriages and partnerships, which decreased the levels of childlessness (as previously discussed, marital status has a strong negative association with childlessness). Thereafter, childlessness started increasing again due to socioeconomic advantages, including the already-discussed advances in education and labor market (Festy, 1980; Poston & Trent, 1982; Rowland, 1998).

Regarding geographic location, most studies indicate that childlessness prevails in urban areas. In addition, the greater the population density in urban spaces, the greater the chance of a woman not having a child. The discussion about this variable also exposes that the propensity of childlessness in the urban area may be, in a way, inflated due to the selective migration of people who previously lived in rural areas and seek environments with greater levels of tolerance regarding different types of family arrangement

(Veevers, 1979). Furthermore, in general, people residing in rural areas are oriented, to a greater extent, to traditional family values. Communities are smaller, family ties closer, and the bond with the church deeper. Conversely, living in an urban area enables the adoption of individualistic and less traditionalist practices (Bloom & Pebley, 1982).

Finally, the literature recurrently discusses the relationship between childlessness and religion and documents a consistent negative relationship between these variables. Usually, those who do not attend religious services, without affiliation, and who do not read the Bible are more likely to be childless (Heaton *et al.*, 1992; Veevers, 1979). Tanturri & Mencarini (2008) show that women without strong religious beliefs are also more likely to be childless (or have one child). Accordingly, Veevers (1979) discusses that the most important distinction does not seem to be between different religious affiliations, but between two larger groups: those who manifest having a religious affiliation and those who do not; and evidence points to a greater propensity for childlessness among the latter. In a similar vein, religious affiliation, religious attendance, and religious salience tend to be negatively associated with attitudes toward childlessness (Uecker *et al.*, 2022).

#### 4. Different types of childlessness: developing a proposition of general pathways to childlessness

Overall, childlessness is characterized in the literature as a non-event, or, in other words, the absence of biological children, that includes a variety of situations and can arise from different contexts and motivations (Houseknecht, 1987), as also previously discussed in Section 2. An important differentiation of types of childlessness involves the aspect of timing. According to this perspective, childlessness can be divided into *temporary* or *permanent*. The first takes the form of a momentary and reversible status, almost always resulting from the postponement of childbearing; the second means that the reproductive period has ended, and there is no longer the possibility of pregnancy (Bloom & Pebley, 1982). Differentiating childlessness according to a *tempo* perspective is important for understanding the fertility levels of a population (Agrillo & Nelini, 2008). Including young women in an analysis that aims to measure irreversible childlessness, for example, even if this group has reported not desiring (at all) to have a child, can generate problems, since their life trajectories could lead them to change their fertility preferences.

Probably the most frequent differentiation between types of childlessness is *voluntary* vs. *involuntary* childlessness. According to Veevers (1979), women

without children due to involuntary reasons fit into situations of sterility, while voluntary childlessness is due to continuous control of fertility through contraceptive methods. In this second case, the individual deliberately decides to renounce childbearing, a decision that remains throughout life. Veevers (1979) also suggests that women who do not have children voluntarily tend to belong to a more independent group, with different attitudes and values. Similarly, Waren and Pals (2013) conceptualize voluntary childlessness as a biologically capable person who chooses not to have children. Moreover, following the line of thought of Veevers (1979), other authors define involuntary childlessness strictly as a physiological disability, while voluntary childlessness deals with other possibilities associated with the conscious rational decision to never have children (Carmichael & Whittaker, 2007; Hakim, 2002).

Different from the definitions of involuntary childlessness exposed so far, the U.S. National Survey of Family Growth (a survey that collects information on marriage, contraceptive use, infertility, and pregnancy) proposes a broader characterization, not only restricting it to sterility but including other feasible situations (focused on women), such as difficulty in finding a suitable partner to share the willingness for childbearing; medical counseling to not to become pregnant, since this could lead to a situation that puts the woman and the baby in danger; and women in a formal or informal union with at least 3 years of unprotected and uninterrupted sexual intercourse who have never become pregnant. Voluntary childlessness, on the other hand, is defined as a context in which fertile women do not have any expectations of having children (Abma & Martinez, 2006).

Waren & Pals (2013) and Bloom & Pebley (1982) also do not limit themselves to sterility when defining involuntary childlessness and discuss that other circumstances active throughout the life course can also generate this specific situation. Involuntary childlessness, in this sense, would include not only all individuals biologically unable to have children but also those who are forced by other situations, in which it is not possible to have full control. These situations include financial obstacles, difficulty in finding a partner who shares the same family ideals, the need to allocate time and resources to child care, as well as other responsibilities such as ongoing pressure at work and careers, which relates to the discussion of opportunity costs held in Section 2.

Hence, as demonstrated, different situations and obstacles active throughout the life course can contribute to if and how an individual remains childless, which makes the differentiation between involuntary and voluntary

childlessness a complex task (Miettinen *et al.*, 2015; Rowland, 1998). The scenarios discussed below exemplify and delve into this complexity. The first scenario deals with women who postpone pregnancy to the point where it is no longer possible due to fecundity constraints (permanent postponers). In this case, an originally voluntary behavior (of not wanting or having children) may end up becoming involuntary (Berrington, 2017; Rowland, 1998). Marika and Eva (2017) emphasize that childlessness is rarely defined at the beginning of the reproductive period, but it stems from successive postponement decisions, which, in the end, can result in permanent childlessness. Not having children is, therefore, not necessarily a consequence of the preferences of a woman, man, or couple (the focus of the discussion is generally on women, due to the higher complexity involving the reproductive period).

Another scenario occurs when the boundary between choice and constraint is unclear. For example, the inability to enter into a union may be choice-dependent, that is, individuals have little propensity for family life; or it may depend on the circumstances, meaning the inability (regardless of the reason) to find a suitable partner (Tanturri & Mencarini 2008). A third scenario in which becomes difficult to define childlessness has women who are not fertile and, at the same time, do not have the desire to have a child. If, on the one hand, sterility can define the absence of a child as involuntary, its own preference indicates a voluntary character (Mcallister & Clarke, 2000).

Carmichael & Whittaker (2007) further discuss what could be the fourth scenario presented here. This is described by a couple, in which the woman or the man is infertile or has chosen not to have a child. In some way, this impossibility or unwillingness to have a child will impact the respective partner, given that this situation was not chosen by him or her, making it difficult to characterize the absence of children of this second individual in the relationship. In the context of a union, therefore, an individual's choices and preferences can directly or indirectly impact those of their partner. Consequently, it is possible that changes occur along the couple's life course, such as one of the parties convincing the other not to have a child, which, ultimately, produces voluntary childlessness for both of them.

The discussion about these definitions (voluntary vs. involuntary) and difficulties in characterizing childlessness is also linked to the historical contextualization of childlessness discussed in Section 2. The trend of childlessness would follow something similar to a U-shaped curve, that is, a decrease between the beginning and middle of the 20<sup>th</sup> century and a subsequent increase among the cohorts born mainly after the 1960s (Festy,

1980; Poston & Trent, 1982; Rowland, 1998). In Spain, England, Wales, and France, for instance, around 18–20% of the women born around the 1920s were childless. These percentages dropped to something between 10 and 15% among the birth cohorts from 1940 to 1950 and increased again to somewhat around 20% in the 1960s and onward (Reher & Requena, 2018). This pattern would result from the process of socioeconomic development. The high levels of childlessness observed initially (the first peak of the “U”) would have occurred, mostly, due to involuntary childlessness caused by malnutrition, infectious diseases, and the absence of structural and economic conditions in societies and families. With the socioeconomic progress observed throughout the century, those high levels entered a downward trend. From the cohorts born in the 1960s onward, a rising trend in childlessness began to be observed. Moreover, in opposition to the other (first) period of high levels observed, childlessness would be largely an outcome of “voluntary” reasons. Urbanization, increasing levels of education, greater opportunities for employment, higher wages for women, and a greater presence of individualistic and secular values compose a set of explanations for why the new and current levels of childlessness could be mainly defined as voluntary childlessness (Festy, 1980; Poston & Trent, 1982; Rowland, 1998).

Now, specifically about the current rising trend in voluntary childlessness, this section discusses some significant points that will eventually lead to the proposition of general pathways to childlessness. The first one is about the relationship between the *temporary* versus *permanent* distinction of childlessness. At the beginning of the reproductive period, it is possible that a certain woman chooses not to have a child temporarily, which usually occurs for reasons of work or studies, characterizing this situation as temporary and voluntary. It so happens that this scenario admits changes, while gradually and consciously this same woman may end up deciding not to have a child at any time, a context characterized as permanent and voluntary. As already discussed, the continuous postponement of childbearing can cause the transformation of a desire once temporary into something permanent (Miettinen & Szalma, 2014; Nicoletti & Tanturri, 2008; Tanturri *et al.*, 2015).

The second significant point to stress about the recent levels of voluntary childlessness deals with the terms and concepts usually used to refer to childlessness. Due to the increase in the number of women who voluntarily do not want to have children, some studies have started to use the term “childfree” to refer to voluntary childlessness, since it would better characterize a person who has no intention, plan, or desire for a child, even if she or he has biological and economic conditions to do so. It was

initially used in 1972 by the National Organization for Non-Parents as a form of opposition to the term childless, which should refer to those who wish to have children but are unable to because of biological constraints (Agrillo & Nelini, 2008). According to feminist perspectives, in situations of voluntary childlessness, the term childless should be replaced by childfree, since, in English, the suffix “less” can indicate a situation in which something is “missing,” ultimately leading to a meaning of “unhappiness.” Considering that in these situations childlessness is a result of people’s own and deliberate choices, childfree would be the most appropriate term (Kreyenfeld & Konietzka, 2017). There are also negative stereotypes related to women choosing a childfree life. In different contexts and societies, the deliberate choice of childlessness violates the social norm, generating harmful labels for these women (Agrillo & Nelini, 2008).

As already mentioned, involuntary childlessness can be due to a set of factors that include sterility, lack of an adequate partner, medical recommendations, financial difficulties, professional pressure, or the transformation of a situation that was once temporary into a permanent one (due to continuous postponement). Voluntary childlessness, on the other hand, has a wider range of motivations. The third significant point on voluntary childlessness to highlight here talks about this. Houseknecht (1987) discusses that a life free from a series of responsibilities that follow the birth of a child, greater opportunities for self-fulfillment, and easier mobility between residences would encompass almost all the motivations behind voluntary childlessness. According to Frejka (2017), men and women decide to remain childless (or childfree) due to their own subjective reasons. In this sense, the main causes of voluntary childlessness would be compliance and satisfaction with life and with the relationship (in the case of partnered individuals), the appreciation of freedom and independence, the lack of responsibilities regarding raising a child, the absence of a paternal or maternal instinct, and the desire to experience moments in life in which, at least in these individual’s views, the presence of a child could become an obstacle.

The main objective of this section was to analyze the most discussed types of childlessness in the literature, highlighting the particularities of the *voluntary* versus *involuntary* distinction. Using this discussion as background, this study develops a summary of possibilities among which individuals can become childless. Namely, from the different characterizations and situations in which childlessness can arise, a set of general pathways to childlessness is proposed. Obviously, this framework does not encompass all possible combinations of situations that could cause childlessness, however, using the set of the

main concepts discussed above (*temporary* vs. *permanent* and *involuntary* vs. *voluntary*), a proposition of general pathways to childlessness is developed. This proposition focuses on the female population, given their limited reproductive period, and, therefore, of greater impact on the temporary versus permanent distinction. The numbered paragraphs and Figure 1 ahead describe and illustrate this proposition of general pathways to childlessness.

1. Involuntary childlessness (since earlier ages) due to sterility, failed treatment of infertility, medical recommendations, financial difficulties, or professional pressure – the main causes discussed in the literature presented above. This first general example outlines a situation in which there is no reversal from temporary to permanent childlessness, because, due to any of these causes, this woman was unable to become a mother throughout the entire reproductive period. Even if she wanted to have a child, it was never possible as a result of one or of a mix of these causes, hence, involuntary and permanent childlessness (it was permanent from the beginning).
2. Involuntary childlessness due to a continuous postponement of childbearing. When younger, the woman had a desire or intention to have a child, however, the birth of this first child remained on hold for some reason, for example, job market constraints, the pursuit for higher levels of education, or lack of a suitable partner. When then, she decides to have her first child; it is no longer possible, whether due to biological constraints, the lack of a suitable partner, or other reasons. In this case, therefore, there is a reversal of temporary childlessness to permanent childlessness, and, since there has been the desire to become a mother at some point, this is characterized as involuntary childlessness.
3. Voluntary childlessness from earlier ages. In this situation, the woman deliberately chooses to not have children since she is young, therefore, there is no reversal from temporary to permanent childlessness, and her childless (or childfree) “state” is considered voluntary.
4. Voluntary childlessness at older ages. In this case, the deliberate decision to not have children happens at an older age (close to the end of the reproductive period). When she was younger, the desire for becoming or not a mother had not yet been fully formed, and for some reason (e.g., the partner convinced to not have children, or the woman herself adapted to a life without a child), the woman deliberately chose to remain childless (or childfree) later in life. Therefore, there is voluntary childlessness with a reversal from temporary to permanent childlessness.

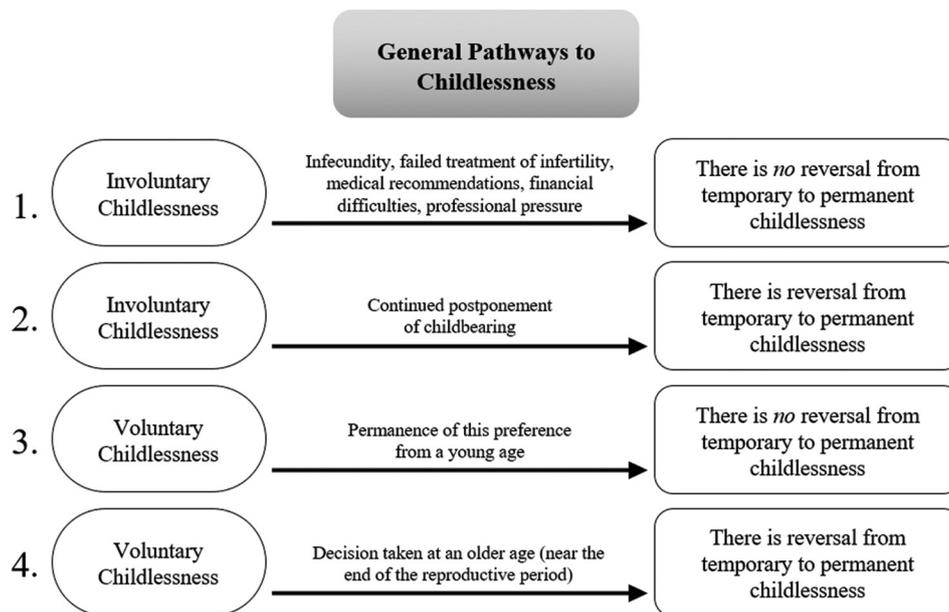


Figure 1. Proposition of general pathways to childlessness (using the main types and concepts of childlessness). Source: Author's own elaboration.

## 5. Concluding remarks

This study aimed to analyze theoretically a set of important and recurrent issues discussed in the literature on childlessness. In the absence of a theoretical background developed specifically to explain childlessness, Section 2 contributes by providing an overview of different aspects and theoretical approaches that, to some level, relate to childlessness and help explain this non-event. It showed that in addition to some biological explanations, socioeconomic advances catalyzed by a continuous process of globalization contribute, to a great extent, to explaining childlessness, especially its current rising trend in developed countries. Table 1 compiles all the explanations, not only these contexts and aspects but also the theoretical approaches. Some of the aspects discussed, such as greater participation of women in the labor market, increasing education and salaries, higher cohabitation, individualism, and secularization, are closely correlated to the explanations provided by some theoretical approaches, especially, the Rational Choice Theory, the Second Demographic Transition, and the Preference Theory.

Section 3 presented the association between childlessness and important (and recurrent) sociodemographic variables. This section contributes by particularly showing how the literature has been documenting that childlessness prevails between the higher educated; the ones who have never been partnered; the African American and urbanized women; and the subgroups without a religious affiliation or with lower religious attendance.

Section 4, by presenting and discussing important types of childlessness, proposes a general framework of pathways to childlessness. The distinctions between *temporary* versus *permanent* and *voluntary* versus *involuntary* childlessness were critical to the development of this framework. Four different pathways were proposed. The first one points to a scenario in which involuntary childlessness was present from the beginning, due to several reasons, for example, sterility, failed treatment of infertility, or financial difficulties. In this case, there is no reversal from temporary to permanent childlessness. In the second scenario, involuntary childlessness is a consequence of continuous fertility postponement; therefore, there is a reversal from temporary to permanent childlessness. The third one describes a general setting in which voluntary childlessness was a characteristic from earlier ages; consequently, there is no reversal from temporary to permanent childlessness. Finally, voluntary childlessness at older ages as a consequence of events taking place during the life course, which points to a reversal from temporary to permanent childlessness.

As emphasized, the number of studies discussing childlessness theoretically is low, and, different from the theories developed to explain the fertility transition, it lacks a theoretical framework exclusively and consistently devoted to discussing childlessness. Therefore, by discussing this series of subjects, this work contributes to the ongoing process of establishing a theoretical framework for childlessness. As a consequence, while it raises different approaches to studying childlessness, it also contributes by encouraging further research on this topic, particularly considering projections that indicate a future

increase in childlessness (Tanturri *et al.*, 2015). Moreover, it contributes by proposing a general framework of pathways to childlessness. The intent of such endeavor is not only to debate different scenarios that could lead to childlessness, which by itself is another original contribution but also to function as a background for future studies on childlessness, whether empirical ones (using longitudinal data, for example) or, again, theoretical ones, delving into these specific scenarios and pathways.

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