DEMOGRAPHIC RESEARCH

VOLUME 52, ARTICLE 7, PAGES 179–228 PUBLISHED 28 JANUARY 2025

https://www.demographic-research.org/Volumes/Vol52/7 DOI: 10.4054/DemRes.2025.52.7

Review Article

The changing inter-relationship between partnership dynamics and fertility trends in Europe and the United States: A review

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The changing inter-relationship between partnership dynamics and fertility trends in Europe and the United States: A review

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Abstract

BACKGROUND

Profound shifts in partnership and fertility in recent decades call for a re-examination of the linkages between partnership and fertility dynamics.

OBJECTIVE

This review systemizes the literature across Europe and the United States studying the intersection between partnership and fertility, providing a roadmap accessible across disciplines. We categorize the pathways through which partnerships and childbearing are linked according to different partnership dimensions – type, timing, duration, order, dissolution – and investigate key factors that influence these pathways (i.e., macro context, migration status, race/ethnicity).

RESULTS

We find that marriage remains more predictive of childbearing than cohabitation, and longer-lasting partnerships formed earlier in the life course are reliably linked to higher fertility levels. As partnership trajectories continue to become more complex due to dissolution and re-partnering, recent research suggests that complexity will ultimately depress fertility, instead of increasing it. Country context shapes the relationship between partnering and fertility by influencing the costs and benefits of each, over time and space. Finally, because race/ethnicity and migrant status are key predictors in family behaviours and the partnership context for childbearing, we also found variation by race, ethnicity, and migrant status in the intersection of partnership and fertility, which can persist across migrant generations.

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CONTRIBUTION

Our review demonstrates how every facet of partnership relates to fertility and emphasizes the importance of studying partnership as a multi-dimensional and dynamic concept. Partnership should be viewed as a sequence of transitions with varying meanings across subgroups, time, and the life course, instead of focusing on summary measures such as average ages of marriage and first birth.

1. Introduction

Historically, fertility and partnership, especially marriage, were studied as consecutive inter-linked life stages, such that fertility change was attributed to either changes in entry into marriage or changes in marital fertility (Bongaarts 1978; Van Bavel and Reher 2013; Bongaarts 2015). However, the pathways between partnership – which we broadly define as a coresidential intimate relationship - and childbearing have become more heterogeneous due to increased nonmarital childbearing, partnership dissolution, repartnering, and childbearing with multiple partners (multi-partner fertility) (Sobotka and Toulemon 2008, Lesthaeghe 2010). The contemporary emergence of a range of family forms - childree couples, cohabiting couples with children, same-sex couples, stepfamilies, lone parents, coparenting arrangements - make studying, describing, and predicting fertility change through its linkages with partnership dynamics much more complex (Thomson 2014). Moreover, these changes have not been uniform across different population subgroups and countries (Jalovaara, Andersson, and Miettinen 2021), meaning that nowadays there is greater diversity in the relationship between partnership and fertility within and between populations and across countries. Due to the profound shifts in partnership and fertility and the resulting complexity, it is important to re-examine the linkages between partnership and fertility dynamics and how they have been reshaped.

This paper examines the evolving inter-relationships between partnership dynamics and fertility across European countries and the United States and puts forward an analytical strategy to systematise these relationships. While recent review papers have examined changes in either partnership or childbearing, with a particular emphasis on the United States (Lyngstad and Jalovaara 2010; Balbo, Billari, and Mills 2013; Guzzo and Hayford 2020; Raley and Sweeney 2020; Sassler and Lichter 2020), no previous review has brought together evidence from across the life course to focus explicitly on both elements and their changing relationship. There are several motivations for this review: First, understanding how partnership dynamics raise, lower, delay, or speed up births will improve methods for projecting fertility. For instance, knowing how children from a

previous relationship impact couples' future childbearing decisions is key to predicting fertility when re-partnering is prevalent. Moreover, in an era of below-replacement fertility, it is important to know whether certain partnership behaviours are related to childlessness and how this is shaped by contextual factors. Second, with improved understanding of the evolving intersection between partnerships and fertility, decision makers will have a better idea of the future shape of families and households, which, together with more accurate fertility projections, are central factors affecting the demand for services (i.e., schools, childcare, and welfare support), the size of the labour force, and population ageing, and inform the creation of policies and support systems inclusive of different family structures. Third, the intersection of partnership and fertility varies markedly by education, ethnicity/race, nativity, and macro context. Understanding such differences helps identify new mechanisms within family systems and inform future theoretical development. Lastly, the partnership context of childbearing has implications, for birth outcomes, health, and child and family well-being (Goldberg and Carlson 2014; Brown, Manning, and Stykes 2015; Cavanagh and Fomby 2019), and varies greatly by socioeconomic background (McLanahan 2004; Härkönen, Bernardi, and Boertien 2017). For example, as separation and re-partnering increase, parents with children born across multiple relationships may face challenges caring for their resident and non-resident children, especially if they come from more disadvantaged backgrounds (Guzzo and Furstenberg 2007; Cherlin 2008; Guzzo 2014). If certain partnering and childbearing behaviours are consistently associated with disadvantage, projecting their growth is fundamental for effective public planning and social policies.

We begin by briefly summarizing the main theories about how and why relationships between partnership dynamics and fertility have shifted. We then describe the search methods employed to identify papers. We review different dimensions of partnership – type, timing, dissolution, re-partnering – and their inter-linkages with childbearing. For each inter-linkage, we explain the potential underlying mechanisms driving any associations, synthesizing evidence where there is consensus and identifying areas where evidence is more mixed. Different aspects of fertility are considered: age and timing of childbearing, likelihood of having a birth, childlessness, and completed family size. We also explore the two-way relationship between partnership and fertility dynamics: Being in a partnership may increase the likelihood of having children, but having children may also affect partnership dynamics.

Lastly, we examine the roles of education, migration and ethnicity/race, and macro context in the inter-linkages between partnership dynamics and childbearing. Education is useful to examine as a proxy for socioeconomic status and human capital because it has a very strong and well-studied relationship with both partnership and fertility and has applicability across countries (Lutz and KC 2011). While Anglo countries' family research often focuses on measures of deprivation and socioeconomic gradients that may

be time-varying, such as employment or income, in continental European research education is usually more time-fixed and subgroup variation by education more universally understood and widely used.

Migration and ethnicity/race are also important to examine due to the increasing heterogeneity of societies, particularly in European countries. Family research can tend to focus on studying native-born people or the dominant ethnic group and avoid the additional complication and noise of including data on migrants and ethnic/racial minorities, which are often difficult to analyse. We focus specifically on migrant/ethnic research to gain a more comprehensive and inclusive understanding of partnership and fertility changes across the Western world. Lastly, we focus on the macro context, particularly welfare states, since they play a substantial role in shaping cross-national and regional variation in the partnership and fertility relationship (Esping-Andersen 2009; Never 2013; Herbst-Debby 2022). For example, family policies and governance which provide more support to lone parents can encourage lone parenthood (Bradshaw, Keung, and Chzhen 2018; Zagel, Hübgen, and Nieuwenhuis 2021). Religious and legal frameworks are also important contextual factors which may encourage nonmarital childbearing by reducing the role of religious institutions in peoples' private lives (Perelli-Harris et al. 2014; Liefbroer and Rijken 2019; Vermeulen, Zoutewelle-Terovan et al. 2023) or by recognizing and regulating nonmarital partnerships (Sánchez Gassen and Perelli-Harris 2015; Jónsson 2021)

The review focuses on childbearing within heterosexual relationships. Although we acknowledge the increasing importance of childbearing via assisted reproductive technology and within same-sex partnerships (Golombok 2015; Guzzo and Hayford 2020; Remes et al. 2022), they are beyond the scope of this review.

2. Theories on the changing relationship between partnership and childbearing

Before reviewing the empirical evidence as to how the intersection between partnership and fertility is changing, it is useful to remind readers of the variety of structural, normative, and other contextual explanations for these major changes that have been put forward across time. From a technical perspective, the advent of modern contraception in the 1960s meant that couples could have intimate relationships without the risk of pregnancy, decoupling partnership from fertility (Murphy 1993; Sassler and Lichter 2020), and could have the means to forgo, delay, or space births (Lewis and Kiernan 1996), leading in particular to women having greater sexual freedom and control over the life course. From a microeconomic perspective, increased women's economic independence resulting from rising female education and labour force participation from

the 1970s lessened the attractiveness of marriage and increased the likelihood of divorce (Becker 1981), thus tending to reduce fertility. Later ages at leaving education also delayed partnership formation due to increased role incompatibility between studying and family formation (Blossfeld and Huinink 1991), and later entry into adult economic roles prolonged the search for a partner (Jejeebhoy 1995); delayed partnership formation often translated into delayed entry into parenthood and smaller completed family sizes (Westoff 1986; Beaujouan 2020).

In the 1980s, emphasis was redirected to the role of ideational change and secularization in reshaping the links between partnership and fertility (Lesthaeghe and van de Kaa 1986; Lesthaeghe 2010). In a context of greater sexual freedom, increased economic independence for women, and weakening of traditional and religious expectations, partnerships were deemed to exist primarily for personal fulfilment rather than economic co-dependence or having children, leading to increased cohabitation, nonmarital childbearing, and higher rates of partnership instability (Giddens 1992). Religious mores were seen to be rejected in favour of personal preferences, creating greater heterogeneity in the relationship between partnership and childbearing (Lesthaeghe and van de Kaa 1986). At the same time, population subgroups with higher levels of religiosity exhibited more traditional biographies, with earlier marriage leading to larger families (Philipov and Berghammer 2007; Peri-Rotem 2016; Liefbroer and Rijken 2019; Stone 2023). However, the decline of fertility to very low levels, especially in southern Europe in the 1990s, highlighted how uneven progress in gender equality across domestic, educational, and occupational spheres may prevent partnered men and women from achieving their preferred levels of childbearing, especially where women have made occupational and educational strides but workplaces and domestic norms have not equally evolved to accommodate families (McDonald 2000). This weakening between partnership and fertility may reflect not lifestyle preferences but an incomplete gender revolution where women's roles have changed profoundly but men's roles have not, making normative family building difficult to accomplish (Esping-Andersen and Billari 2015; Goldscheider, Bernhardt, and Lappegard 2015).

In more recent years, the role of economic uncertainty has been a central explanation for changes in fertility and partnership. This roughly began with the economic recession of 2008, which was posited as a reason for the further postponement or foregoing of partnership formation, especially marriage (Bolano and Vignoli 2021; Vignoli, Tocchioni, and Salvini 2016). Economic uncertainty affected the intersection of partnership and childbearing because uncertainty appeared to discourage marriage more strongly than parenthood, weakening the relationship between marriage and fertility for disadvantaged groups in the United States and United Kingdom (Gibson-Davis 2009; Palumbo et al. 2023). In the United States, cohabiters may have had children but only married when they reached a certain economic standard (i.e., had money for a wedding,

owned a house) (Smock, Manning, and Porter 2005; Edin and Kefalas 2011). The 'diverging destinies' thesis of McLanahan (2004) reflected this, arguing that advantaged, highly educated women followed one path towards stable marriage followed by childbearing, while disadvantaged, less-educated women were more likely to give birth early outside of marriage or within unstable partnerships. Across Europe, the 'pattern of disadvantage' hypothesis (Perelli-Harris et al. 2010) posited that cohabitation was adopted as a strategy to manage the uncertainty of unemployment and precarious work, making fertility within cohabitation a marker of disadvantage.

The next section describes our literature search strategy and the system we use throughout our review to catalogue the role of macro and individual factors in the pathways between partnership and fertility.

3. Methodology

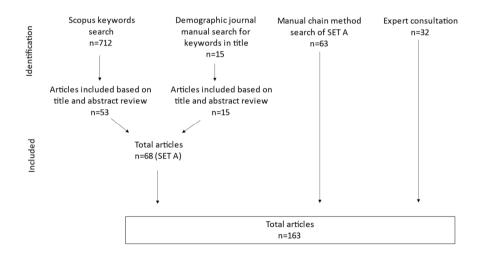
Social science systematic reviews often focus on a policy question with a limited number of directly relevant articles (Gauthier 2007; Bergsvik, Fauske, and Hart 2021) or on a very specific topic – e.g., gender equity within the household and fertility (Raybould and Sear 2021), or gender differentials in the risk of suicide following relationship breakdown (Evans, Scourfield, and Moore 2014). Literature reviews of broader, more exploratory issues, such as the predictors of union dissolution (Lyngstad and Jalovaara 2010) and determinants of fertility (Balbo, Billari, and Mills 2013; Vasireddy et al. 2023), do not document the use of systematic methods in the same way because an exhaustive detailed review of all papers is much less feasible and key word searches yield a large number of results, many of which are not relevant.

In this paper, in order to be as systematic as possible, we used a four-step method to search for relevant papers. First, we did a keyword search using Scopus, focusing on English language journal articles from a variety of social science disciplines (i.e., sociology, economics, demography) published between 1990 and 2023, studying Western countries (European countries, the United States, Australia). This yielded 712 articles. We reviewed the titles of the search results and kept those that studied at least one element of partnership, one element of fertility, and the link between the two, leaving us with 53 relevant papers. Second, we reproduced the same keyword search for several key demographic journals, focusing on titles (Demographic Research, Population Studies, Population and Development Review, European Journal of Population, Demography), yielding 15 additional articles. Third, we then reviewed the reference sections of this collection of 68 papers as well as other works that had referenced the papers for further relevant titles, finding 63 more papers. Fourth, we added 32 final papers based on expert knowledge within the research team and in consultation with colleagues.

In this step, some of these works included papers in which the relationship between partnership and fertility was not the main research interest but one of several relationships studied, or was studied within the context of migration, race/ethnicity, different welfare regimes, and religion. Papers that were not identified through the Scopus keywords search but were nevertheless on the topic of the relationship between partnership and fertility came mostly from the demographic literature and not from an exhaustive search of all social science journals. Studies based on Scandinavian data are overrepresented based on population; nonetheless, a wide range of Eastern, Southern, and Western European countries are also represented.

Our literature review examines what kinds of relationships exist between partnership and fertility. Because we do not seek to answer whether something is true or not (i.e., 'Do family policies affect fertility?'), it is inherently less experimental and there is not a clear hierarchy of methods or study quality (i.e., randomized control trials versus retrospective studies). Because of this, we do not group papers by method but instead by the dimension of partnership they focus on, whether they are multi-country or single-country, and how they were identified in our search strategy, which we record in a separate document available for reference in the Appendix. Details about the specific keywords used can also be found in the Appendix.

Figure 1: Literature search strategy



4. Findings

4.1 Ever experiencing a partnership and fertility

Research has consistently shown that partnered individuals are much more likely to conceive and have children than unpartnered people (Heaton, Jacobson, and Holland 1999; Baizán, Aassve, and Billari 2004; Spéder and Kapitány 2009; Wagner, Huinink, and Liefbroer 2019). However, being childless can result from a range of partnering experiences – currently single, never having been either married or partnered, having separated – reflecting the diversity of partnership histories linked with childlessness (Heaton, Jacobson, and Holland 1999; Keizer, Dykstra, and Jansen 2008; Mynarska et al. 2015; Berrington 2017; Saarela and Skirbekk 2020; Tocchioni et al. 2022). Country context, which is discussed in greater detail in a later section, is also related to the link between having a partner and childlessness. In Eastern and Southern European countries, most childless women have never had a partner, compared to the partnership histories of childless women in Northern and Western European countries, which are more varied (Mikolai 2017). Childless Finns tend to have a history of either serial cohabitation or lack of coresidential partnerships (Jalovaara and Fasang 2017). German childless men and women tend to experience more time single and less time married compared to parents, but most are nonetheless in a relationship by age 40, and half of those in a relationship are either married or cohabiting (Raab and Struffolino 2020).

The relationship between experiencing a partnership and subsequently having children may be because those in a partnership have more regular sexual activity. Moreover, having children within a coresidential relationship tends to be preferable. Finding a partner, especially at older ages, has been shown to intensify positive fertility intentions in Germany (Wagner, Huinink, and Liefbroer 2019), and across countries, being partnered at older ages tends to increase fertility intentions (Sturm, Koops, and Rutigliano 2023). For a minority, the mechanism can be in the reverse direction: Those who avoid partnering may do so precisely to avoid having children (Bongaarts 1978). Alternatively, both partnership formation and childbearing can be jointly determined by a confounder: Characteristics which predispose people to remain unpartnered also predispose them to remain childless (Fiori, Rinesi, and Graham 2017).

That said, recent evidence suggests that traditional associations between partnership formation and childbearing are weakening, particularly for the first partnership. Most recently, Finnish data show that for the 1990s birth cohorts, first partnerships were more likely to end in separation than in a first birth, suggesting the first partnership they may not be about childbearing at all (Jalovaara and Kulu 2018; Rahnu and Jalovaara 2023), and signalling a clear departure from older cohorts who were more likely to have first births in first unions and do the bulk of childbearing with a first partner (Andersson 2023).

Finnish data also show declining first birth rates within unions, again emphasizing that the link between being in a union and fertility may be weakening (Hellstrand, Nisén, and Myrskylä 2022). In the United Kingdom, first partnerships among young adults in the 1980s and 1990s birth cohorts of all education levels were more likely to dissolve than transition to another type of relationship, again emphasizing that the first partnership has a new meaning beyond either marriage or fertility, across social groups (Pelikh, Mikolai, and Kulu 2022).

4.2 Partnership type and fertility

There is consensus in the literature that the type of partnership affects the likelihood of childbearing: Married people are more likely to have children than either cohabiters or those in non-coresidential (living apart together) relationships (Baizán, Aassve, and Billari 2003; Baizán, Aassve, and Billari 2004; Kiernan 2004; Andersson 2021). Moreover, cohabiters who plan to marry are more likely to have or intend to have children (Musick 2007; Hiekel and Castro-Martín 2014). In the United States, declines in marriage led to increased childlessness in the 1990s, although some of the effect was offset by nonmarital childbearing (Hayford 2013). In Finland, whilst decreasing fertility rates among partnered women explained most of the decline in fertility, decreasing marriage rates nonetheless accounted for 19% of the decline in first birth rates from 2000-2018 (Hellstrand, Nisén, and Myrskylä 2022). Traditionally, childbearing within marriage was normative because men and women had complementary economic roles within a family and marriage obligated people to adhere to their roles. Religious and sexual norms reinforced the notion of marriage as a prerequisite for childbearing (Pollak and Watkins 1993). As the role of marriage has shifted from economic to emotional foundations and cohabitation has gained a foothold, in some countries and population subgroups, having any type of partner (married or cohabiting) is equally associated with having children (Mikolai, Berrington, and Perelli-Harris 2018). In Iceland, where nonmarital fertility is very high, most people still marry, emphasizing that marriage is valued by couples even if delinked from fertility (Jónsson 2021).

Nonetheless, levels of childbearing generally remain higher within marriage than cohabitation (Sassler and Lichter 2020). There are several possible reasons for the association between partnership characteristics and childbearing. Across Europe, couples still view marriage as having greater commitment, stability, and financial and legal protection, providing the best setting for childbearing (Perelli-Harris et al. 2014). Cohabiters might also be aware of an increased risk of relationship instability vis-a-vis cohabitation and therefore opt out of having children, suggesting that large-scale uptake of cohabitation lowers fertility, as in Hungary (Spéder 2006). At the same time, the

mechanism could be reversed: couples still often marry specifically because they want children or in response to a pregnancy (Gibson-Davis, Ananat, and Gassman-Pines 2016; Groepler, Huinink, and Peter 2021). Alternatively, the association between marriage and birth risk could be due to selection based on context or different values: couples who feel sufficiently emotionally and financially stable to get married may also be more likely to feel ready for children, and couples who are more traditional and pro-natalist may choose marriage over cohabitation (Surkyn and Lestaeghe 2004; Hiekel and Wagner 2020).

The link between cohabitation and fertility varies contextually, depending on the meaning and acceptance of cohabitation (Perelli-Harris et al. 2014; Mikolai, Berrington, and Perelli-Harris 2018). Where cohabitating families are common and cohabitation is viewed favourably for raising children, there may be little or no difference in how marriage and cohabitation relate to fertility (Kravdal and Rindfuss 2008; Sobotka and Toulemon 2008). For example, Rutigliano and Esping-Andersen (2018) find that in Norway (where cohabitation is common) fertility is similarly associated with transition to either cohabitation or marriage, and in Spain (where cohabitation has only recently gained a foothold) fertility is only associated with transition to marriage. Another multicountry study finds that where first births in cohabitation are rare, cohabiting women have lower second-birth conception risks than married women, highlighting the importance of country context (Perelli-Harris 2014). Mikolai (2017) finds that unlike in Western and Northern European countries, in (post-socialist) Central and Eastern European countries, first-birth rates are higher among those who directly marry than those who premaritally cohabit. Mikolai speculates that those who cohabit before marriage may be more liberal and inclined to delay fertility. In Western and Northern European countries, cohabitation prior to marriage is much more common and perhaps signals relationship stability instead of non-traditional behaviour. In Iceland where marriage remains important yet most children are born outside of marriage, registered cohabitation is strongly linked with having children and seen as the stable context in which to raise a family (Jónsson 2021).

4.3 Partnership timing and fertility

It is well established that the age at partnership formation has implications for the tempo (timing) and quantum (level) of fertility (Westoff 1986; Beaujouan 2020). If partnering is postponed, it is likely that childbearing is also postponed, especially in settings where childbearing outside of a union is avoided. In Italy and Spain, where nonmarital fertility is less common, postponement of marriage strongly depresses fertility because childbearing is postponed concurrently with marriage (Beaujouan 2020). A comparison of Sweden and Spain demonstrates that later partnership formation in Spain explains a

substantial proportion of its relatively lower fertility levels (Nishikido, Cui, and Esteve 2022). The postponement of union formation and childbearing may lead to (involuntary) childlessness or lower-than-desired family size due to biological fertility decline with age (Beaujouan, Zeman, and Nathan 2023). In the United States and United Kingdom, women who begin childbearing at younger ages have larger families because they have more time to achieve (or surpass) their fertility intentions (Wu and Martin 2002; Berrington, Perelli-Harris, and Trevena 2015). Conversely, fertility intentions can have a role in the timing of partnership formation such that those who do not plan to have children imminently may also feel less need to find a partner (Compans, Beaujouan, and Dutreuilh 2022). Other changes concurrent with partnership postponement, such as higher first-birth propensity within cohabitation, can also offset the negative effect of postponement on fertility (Boissonneault and de Beer 2022). Finally, the timing of both partnership and family formation can also be jointly determined by confounders (Lillard and Waite 1993): The traits of people who postpone marriage (e.g., the more-educated) also characterise those who postpone childbearing (Nitsche and Hayford 2020).

Research has consistently found that the age at forming partnerships also affects the speed of transition to first and higher-order births. The relationship can be because individuals who delay partnerships and childbearing progress to first or higher-order births more quickly to recuperate their preferred family size before ageing out of reproductive years (Andersson et al. 2009; Frejka 2012; Castro 2015). Among parents in France, those who partner at older ages have their first children more quickly (Compans, Beaujouan, and Dutreuilh 2022). In the United States, there is only a weak link between marriage timing and achieved parity among parents because those who marry after age 30 nonetheless progress to higher-order births, despite the shorter time frame (Nitsche and Hayford 2020). Moreover, multi-country research finds age at first partnership to be related to the likelihood of separation and re-partnering (Gałęzewska, Perelli-Harris, and Berrington 2017). Those who separate and re-partner at a young age are more likely to have higher-order births, as discussed in a later section (Wu and Martin 2002).

The duration of a partnership also has important implications for childbearing. Evidence from the Netherlands (Keizer, Dykstra, and Jansen 2008), Norway (Hart 2019), and Finland (Saarela and Skirbekk 2020) shows that short partnerships are associated with lower fertility and childlessness, with those experiencing long first or second unions having the lowest levels of childlessness. Throughout the Americas and several European countries, experiencing a stable, long-lasting partnership is associated with higher fertility or lower likelihood of childlessness, either because a couple have more time to conceive (Fostik et al. 2023) or because couples prefer to have children in a time-tested relationship. Having children makes partnership dissolution more difficult and costly, so couples are likely to take into account the likelihood of their relationship dissolving when making childbearing decisions (Lillard and Waite 1993; Berrington, Perelli-Harris, and

Trevena 2015). It could be, however, that partnership duration and number of children are jointly determined by other couple characteristics, such as being more financially and emotionally stable or being more religious (Lillard and Waite 1993; Coppola and Di Cesare 2008).

4.4 Partnership dissolution and fertility

Following the increase in divorce rates from the 1970s onwards, increased attention was paid to the impact of partnership dissolution on fertility (particularly completed family size), at both the individual and population level. At the individual level, the evidence from multiple countries consistently suggests that those who divorce have, on average, a lower completed family size than those who never divorce, even if they re-partner (Jansen, Wijckmans, and Van Bavel 2009; Meggiolaro and Ongaro 2010; Van Bavel, Jansen, and Wijckmans 2012), although women who experience more than one divorce tend to have more children and shorter birth intervals (Clarke et al. 1993). Dissolution can depress fertility if people experience long periods of singlehood afterwards or periods of relationship dissatisfaction beforehand. Over historical time, as family formation has been postponed to later ages, the reproductive window following dissolution has become shorter, meaning the effect of union dissolution on fertility may have increased over time, as seen in Winkler-Dworak et al. (2017). Similarly, when union dissolution depresses fertility, more-educated women experience a greater effect size because their family formation windows already tend to be shorter due to postponement (Winkler-Dworak et al. 2017). The observed association may not be straightforward and may instead be shaped by confounders; for example, partnership dissolution and childbearing decisions might be jointly determined by poor health (Lillard and Panis 1996).

At the population level, the evidence as to the impact of increased partnership dissolution on fertility is mixed. Some authors find a positive relationship between divorce and total fertility rates since the 1990s (Billari and Kohler 2004). Bellido and Marcén (2014), however, find that the relaxation of divorce laws is linked to decreased total fertility rates. Studies using microsimulation suggest that union dissolution ultimately decreases fertility. Using Italian and British cohorts, Winkler-Dworak et al. (2017) estimate that for births in higher order partnerships to offset the time spent outside unions, the first union has to produce two children and all women who separate have to re-partner. With French data, Thomson et al. (2012) conclude that a population of stable unions will have higher fertility than one with union instability, even if all separated women re-partner, although differences are attenuated when family formation is postponed.

4.5 Re-partnering and fertility

The literature suggests that the extent to which divorce and separation lead to lower fertility depends in part on the likelihood of re-partnering, as this increases time spent in a sexual union. Countries where re-partnering is more common display a higher proportion of births in second and higher-order unions (Fostik et al. 2023), although in Finland, re-partnering in nonmarital unions appears less effective in maintaining fertility rates than remarriage (Andersson et al. 2022). Multi-partner fertility has increased in recent decades and forms a substantial proportion of all births in some countries, accounting for many third-order births (Thomson et al. 2014; Ginther, Grasdal, and Pollak 2022; Pirani and Vignoli 2023). Re-partnering may lead people to revise their childbearing plans upwards or downwards depending on factors such as age, gender, partnership order, parity, and cultural norms (Ivanova, Kalmijn, and Uunk 2014). Men who re-partner tend to do so at older ages when fertility is lower, in contrast to women, who tend to re-partner at prime childbearing ages, leading to higher re-partnered female fertility (Andersson 2023).

Three main mechanisms have been put forward in the literature to explain the interrelationships between re-partnering and childbearing (Thomson 2004; Thomson et al. 2012). First, in a new relationship, a shared child may be desired to establish family commitment to the union (the 'commitment hypothesis'). Second, there may be a desire to provide a sibling for an existing child (the 'sibling hypothesis'). Third, the 'parenthood hypothesis' argues that having children is an individual-level rite of passage into adulthood and that childbearing within re-partnered unions is more common where at least one of the partners is currently childless. Using Dutch data, Ivanova, Kalmijn, and Uunk (2014) find support for the commitment hypothesis for women in that the presence of children from a prior union does not affect the likelihood of another birth, and women in a second union have a higher risk of parity progression than women in a first union. Another study in Sweden finds that stepfamily couples have a higher second- and thirdbirth risk if the birth was the first or second for that union (Holland and Thomson 2011). Support for the idea that re-partnering and the desire for shared children leads to higher fertility has been found in several countries (Vikat, Thomson, and Hoem 1999; Buber-Ennser and Prskawetz 2000; Jefferies, Berrington, and Diamond 2000; Thomson 2004; Beaujouan 2010).

By contrast, however, evidence from Australia, the United States, Norway, and Sweden finds the overall risk of having a child with a new partner to be much lower if a woman already has two children, suggesting preferred family size persists at the individual rather than the union level (Thomson et al. 2014). And, unlike women, men who have children from a previous union are less likely to have another birth in their new union than women (Ivanova, Kalmijn, and Uunk 2014). Previous studies of populations in Russia, Italy, France, and the Netherlands also support the 'parenthood hypothesis'

(Kalmijn and Gelissen 2007; Meggiolaro and Ongaro 2010; Churilova et al. 2017). Kalmijn and Gelissen (2007) additionally find a 'catching up' effect in the Netherlands, where childless women in a higher-order union are significantly more likely to have a child than childless women in their first marriage, which the authors frame as further support for the individual motivation for having children. A woman's experience of a partnership dissolution may create a sense of urgency to have children not experienced by a similar woman who has never dissolved a partnership.

Increases in dissolution and re-partnering may lengthen birth intervals, since it takes time to dissolve a union and re-partner with someone to have a child with. In countries across Europe, the interval between the first and second birth increases sharply if the second child is with a new partner (Kreyenfeld et al. 2017). At the same time, once in a new partnership, women may accelerate childbearing in order to meet their fertility preferences within their reproductive window (Kalmijn and Gelissen 2007; Beaujouan and Solaz 2012). A study of Italian and British cohorts finds re-partnering produces more children for women who are younger or have fewer children at the time of dissolution (Winkler-Dworak et al. 2017), suggesting age and parity moderate the relationship between re-partnering and fertility. Another multi-country study finds affluence, education, and age at first birth to be negatively related to the likelihood of multi-partner fertility (Thomson et al. 2014). An important area of recent research has focused on whether subgroup variation in dissolution and re-partnering patterns may help explain subgroup variation in fertility. For example, education differentials in fertility may be operationalized through educational differences in relationship instability, such that lesseducated people have more children because they have more unions (Jaloyaara, Andersson, and Miettinen 2021).

4.6 Effects of fertility on partnership

The focus of this review has been on the routes through which changing partnership dynamics affect childbearing. However, there is strong evidence that childbearing and the presence of children affect partnership formation and dissolution. Planning to have children, pregnancy, and childbearing often motivate partnership formation and transitions: Those who want to have children may be more inclined to partner, single people may move in together to co-parent, and cohabiters often marry to legitimize a birth, though these inter-linkages will vary contextually, i.e., by subgroup, depending on the role of marriage, the acceptability of premarital conception and nonmarital childbearing, and the level of support for lone parents (Aassve 2003; Mikolai, Berrington, and Perelli-Harris 2018; Groepler, Huinink, and Peter 2021; Zimmermann 2021; Andreev, Churilova, and Jasilioniene 2022). In an earlier stage of the sexual revolution,

nonmarital sex and limited access to contraception meant nonmarital pregnancies were followed by legitimizing marriages; since then, legitimizing marriages have declined due to changing norms and the acceptance of nonmarital childbearing, changing the link between pregnancy and marriage formation (Pagnini and Rindfuss 1993; Lewis and Kiernan 1996; Raley 2001; Gibson-Davis 2011; England, Wu, and Shafer 2013).

The presence of shared children, especially young children, may discourage partnership dissolution because children raise the cost of separation. Empirical evidence largely supports this, although in some cases those with many children are also more likely to separate than those with fewer children (Lillard and Waite 1993; Andersson 1997; Berrington and Diamond 1999; Liu 2002; Walke 2002; Steele et al. 2005; Coppola and Di Cesare 2008; Todesco 2011; Kulu 2014; Kalmijn and Leopold 2020). However, twins and closely spaced births may also increase the risk of divorce, due to the stress of raising multiple young children (Jena, Goldman, and Joyce 2011; Berg et al. 2020). Having a shared child within a stepfamily can reaffirm both the couple's relationship and the stepfamily, as in Sweden (Holland and Thomson 2011), or have no effect on dissolution risks in the context of cohabitating stepfamilies, as in the United States (Guzzo 2018).

Children may also strengthen cohabiting relationships, which are usually less stable than marriages. In the United States, children stabilize a cohabiting relationship if they are conceived in cohabitation but born within marriage or if the parents marry after the birth (Manning 2004; Musick and Michelmore 2015). In the United Kingdom, births have been found to stabilize cohabiting relationships for younger cohorts (1970) but not older cohorts (1950), which may be attributed to the increased acceptance of cohabiting families over time (Steele et al. 2006). As the sequence of family events has diversified over time, having children in cohabitation may specifically be a symbol of relationship commitment (Berrington, Perelli-Harris, and Trevena 2015).

There is consistent evidence that children from a previous relationship affect subsequent re-partnering. Single parents may find it difficult to re-partner if their free time is limited, or if having children makes them less attractive in the relationship market. In Belgium, this depends on whether the parent has primary caregiving responsibilities or resident children (Vanassche et al. 2015) and thus may differ between men and women. Ivanova, Kalmijn, and Uunk (2013) find in several European countries that men are more likely to re-partner than women, and the gender gap is explained by resident children. Among women, mothers with resident children are less likely to re-partner than non-mothers but the gap narrows as resident children age, likely because younger children demand more attention and resources. Multiple studies have echoed this pattern (Beaujouan 2012; Gałęzewska, Perelli-Harris, and Berrington 2017; Schnor, Pasteels, and Van Bavel 2017; Di Nallo 2019; Di Nallo, Ivanova, and Balbo 2023).

Children from a previous relationship could exert a stabilizing effect on re-partnered couples because children are a shared interest, and parents who have already experienced a breakup might be more selective in their next choice of partner out of concern for their children. However, studies from the United States and across Europe have found that having a child from a previous relationship, particularly at an early age, increases the risk of dissolution (Lillard and Waite 1993; Ermisch and Pevalin 2005; Musick and Michelmore 2018). And for Swedish women who do marry after having had a child outside marriage with a previous partner, divorce risks are higher (Liu 2002). Similarly, US cohabiters with children from previous relationships are less likely to transition to marriage than those without, especially when both partners are parents (Guzzo 2018).

4.7 Educational heterogeneity in the intersection between partnership and childbearing

The effect of the delay in first partnership formation, especially marriage, on parenthood timing varies by education because, at least in Anglo-Saxon countries, those with higher levels of education are more likely to continue to display a more traditional sequence of family formation, with childbearing tending to follow marriage (Sassler and Lichter 2020; Berrington, Perelli-Harris, and Trevena 2015; McLanahan 2004), while delayed marriage does not similarly delay fertility for the less-educated (Edin and Kefalas 2011). This is related to the hypotheses of 'diverging destinies' and the pattern of disadvantage described earlier in the paper, reflecting polarization of family behaviours by class (McLanahan 2004; Perelli-Harris et al. 2010).

For example, a pregnancy occurring to a cohabiting couple can prompt marriage, but this has been found to vary by education level. In the United Kingdom, cohabiters who continue to cohabit after getting pregnant are less educated and more disadvantaged, while highly educated cohabiters tended to marry prior to the birth (Berrington 2001) since views of nonmarital childbearing are more conservative among the highly educated (Berrington, Perelli-Harris, and Trevena 2015). In the United States, however, highly educated women are consistently more likely to both conceive their first child and give birth within marriage, but low-educated women are increasingly more likely to both conceive and give birth within cohabitation, indicating educational differences in the propensity to conceive outside marriage and not in the propensity to marry after conception (Gibson-Davis and Rackin 2014). Across Europe and the United States, there is a positive educational gradient of transitioning from cohabitation to marriage prior to or around the time of having a baby (Hărăgus 2015; Mikolai, Berrington, and Perelli-Harris 2018). By contrast, in Western European countries Vergauwen, Neels, and Wood (2017) do not find an educational gradient in cohabiters' intention to marry, either before,

during, or after having children, suggesting a gap between partnership intentions and behaviour.

4.8 Nativity and ethnicity/race and the intersection between partnership and childbearing

Although there is ample European literature that separately explores patterns of fertility behaviour and partnership behaviour among migrants (Kulu et al. 2019), fewer studies explicitly examine how the intersection of partnership and fertility differs by nativity and race/ethnicity. Typically, migrants to Europe have come from countries such as India, Pakistan, and Bangladesh (to the United Kingdom) or Turkey and Morocco (to Germany and the Netherlands), where childbearing takes place mostly within marriage. However, migrants also come from areas where nonmarital childbearing – including childbearing outside a partnership – is more common, such as other European countries, Sub-Saharan Africa, and the Caribbean. Recent research on migrant partnership dynamics shows both significant diversity across migrant groups within (destination) countries and similarity between migrant groups across (destination) countries (Hannemann et al. 2020).

Although dominant theories focus on migrant fertility, the strong connection between partnership and fertility behaviour means these theories also apply to the partnership behaviours of immigrants and their descendants (Hannemann and Kulu 2015) and the intersection between partnership and childbearing. We know fertility varies by nativity and ethnicity (Coleman and Dubuc 2010; Berrington and Stone 2017; Kulu et al. 2019) and, given the strong intersection between partnership and fertility, such differences may be attributable to partnership differences. In the United Kingdom, first-birth-rate differences across ethnic groups have indeed been explained by partnership differences, with some groups marrying earlier and some remaining unpartnered (Kulu and Hannemann 2016). Similar conclusions explaining fertility differences between immigrants and natives have been reached in Germany (Milewski 2007).

Assimilation theories posit that migrant family behaviours change based on the cultural distance between sending and destination country, time since arrival, and migrant generation (Kulu et al. 2017). Across Europe, descendants of immigrants often exhibit the same partnership behaviours as their parents, which may be similar or markedly different to the native population depending on where the migrants come from (Rahnu et al. 2015; Hannemann et al. 2020; Delaporte and Kulu 2023; Harrison et al. 2023; Mikolai and Kulu 2023). When destination and sending country norms differ, the second generation is exposed to both their parents' values and behaviours and those of the destination country (De Valk and Liefbroer 2007): This results in 'normative conflict' between young second-generation migrants and their first-generation parents, especially

around sexual mores and partnership formation (Giguère, Lalonde, and Lou 2010), and can lead to the emergence of third-culture practices – the 'minority subculture hypothesis' (Mikolai and Kulu 2023). For example, migrants may adopt the cohabitation norms of the destination country but draw the line at nonmarital fertility, in which case we may expect to see migrant and native differences in partnership/fertility dynamics such as childbearing within cohabitation or legitimizing marriages (Berrington 2020).

In the partnership context of the United States, race and ethnicity are key predictors of childbearing and partnership decisions following nonmarital birth (Manlove et al. 2012). In some groups such as Black and Hispanic populations, nonmarital births may be normative and marriage and childbearing will have a weaker link (Harknett and McLanahan 2004). For instance, the proportion of women who marry following a nonmarital birth has declined over time for all women, but the largest declines are among Black women (Gibson-Davis 2011). Moreover, while most nonmarital births to white and Hispanic women occur within cohabitation, most nonmarital births to Black women occur outside of coresidential unions, indicating a weaker link for this subgroup between not just marriage and fertility but also partnership and fertility (Guzman et al. 2010). Black women in the United States have higher rates of unpartnered fertility than white and Hispanic women, partly due to less post-conception marriage but mostly because of a higher likelihood of conception outside of partnership (Sweeney and Raley 2014). However, Black women who have previously been married are less likely to have a nonmarital birth in the future than never-married Black women (Upchurch, Lillard, and Panis 2002). Hispanic people tend to have children within cohabitation since it is seen as an appropriate context for childbearing (Manning 2001; Manlove et al. 2012). Guzman et al. (2010) also argue that cohabitation may have a different meaning among some ethnic groups: Cohabiting unions with children are more stable among Black and Mexican-American parents than white parents. Indeed, among foreign-born Mexican-American parents, cohabiting relationships are as stable as marriages. Moreover, the impact of previous childbearing on re-partnering has been seen to differ by race. For white men in the United States, having children from a previous relationship hastens cohabitation but decreases transition to marriage, while fatherhood does not affect Black and Hispanic men's relationships in the same way (Parker, Sassler, and Tach 2020).

4.9 Country context in the intersection of partnership and fertility

Cross-national comparisons suggest that the relationship between partnership and fertility is influenced by country context, such as the strength of the welfare state, legal frameworks, and religiosity. In Nordic countries where there is a strong welfare state (i.e., subsidized childcare, support for lone parents, liberal divorce laws), decisions to enter or

exit a partnership in the context of childbearing may be less constrained by economic instability (Neyer 2013). As a result, childbearing within cohabitation is prevalent because people do not need to rely on marriage for security, unlike in other European countries (Sobotka and Toulemon 2008; Lesthaeghe 2010). When couples dissolve their unions in Nordic countries, the expectation of spousal support is low because social benefits are available and women are more likely to have remained in the labour force; this encourages re-partnering and having a child with the new partner (Neyer 2013; Kreyenfeld et al. 2017). In the United States where the welfare state is generally very weak, higher benefit payments and better enforcement of child support to unmarried mothers also decrease the likelihood of marriage and time to next birth (Grogger and Bronars 2001; Knab et al. 2009).

In Southern European countries with weak welfare states, like Italy and Spain, social policies assume the family will provide care duties (Esping-Andersen 2009). Recent decades of poor employment prospects and low wages have culminated in economic uncertainty, which has been consistently associated with both union formation and fertility (Vignoli, Tocchioni, and Salvini 2016; Vignoli, Tocchioni, and Mattei 2020). Such regimes typically have more rigid gender norms, low maternal full-time employment rates, strong family-centric values (i.e., leaving home at later ages), higher valuation of religious traditions, and ultimately a stronger reliance on marriage and family for security. Because of this, marriage and childbearing remain strongly linked and postponement of marriage has also led to postponement of childbearing and very low fertility. State support for lone parents is weak and in the event of divorce the economically stronger party is expected to provide spousal and child support. Multipartner fertility – and therefore higher-order births – in Italy and Spain is also much less common since the obligation of spousal maintenance after divorce makes re-partnering difficult (Kreyenfeld et al. 2017).

The importance of the state context becomes especially clear when there are dramatic regime changes. In East Germany, the fall of the socialist state disincentivized marriage (Klärner 2015), resulting in lower marriage rates and a higher share of nonmarital childbearing compared to West Germany (Jalovaara and Kreyenfeld 2020). In the former Soviet Union and former Yugoslavia, early and universal marriage and childbearing within marriage were common under communism and socialism (Sobotka 2002; Thornton and Philipov 2009) until political regime change ended pro-natalist programmes (such as state childcare and housing), along with the incentive to marry early and have large families. The new circumstances prompted the emergence of late marriage and smaller families, and delinked marriage and fertility, explained by increased consumer aspirations due to Westernization, declines in income, and increased uncertainty (Thornton and Philipov 2009; Billingsley 2010; Sobotka 2011). In some post-socialist contexts, pregnancy still generally prompts cohabiters to marry, but more liberal

attitudes toward premarital sex and nonmarital childbearing means the marriage may happen at a later stage (Hărăgus 2015; Andreev, Churilova, and Jasilioniene 2022).

Similarly, during the socialist era in the 1970s and 1980s in the Czech Republic, most first marriages happened in response to pregnancy and most marital first births occurred very soon after marriage, indicating a very strong relationship between marriage and childbearing. Policies incentivized early childbearing, early and universal marriage, and large families by providing preferential housing to families with young children, birth-order-specific parental leave and child benefits, preferential loans to newly married couples, and childcare for children under the age of 3 (Sobotka et al. 2008). After the political regime change of 1989 and the collapse of pro-natalist family policies, cohabitation emerged and marriage was delayed dramatically, even past age at first birth, due to value changes, economic uncertainty, and the high cost of private housing (Sobotka et al. 2008). Marrying in response to pregnancy declined and married women now wait longer to have children, demonstrating a weaker relationship between marriage and childbearing. Childbearing both within cohabitation and without a partner has grown markedly, accounting for over half of first births (Sobotka 2015).

Legal context can also play a role in family formation decisions since countries vary in their legal approaches to cohabitation compared with marriage, including support for cohabiters and their children (Perelli-Harris and Gassen 2012). For instance, the tax and social security systems in Germany promote marriage and the breadwinner family model with one earner and one stay-at-home parent, inducing cohabiting couples to either marry when they plan to have a child or avoid having children (Le Goff 2002). Laws may also change and thus shift the relationship between partnering behaviour and childbearing. In Germany, the spousal maintenance required after divorce has become less generous because high maintenance costs are viewed as hindering men from re-partnering and forming new families (Jalovaara and Kreyenfeld 2020). Similarly, in the United States paying child support reduces men's subsequent fertility but increases their likelihood of marriage, perhaps because it signals parental commitment and thus increases attractiveness in the marriage market (Anderson 2011). Policy changes may also reaffirm unfolding trends. In Nordic countries, women's security within the labour force precipitated the growth of nonmarital fertility, which was then further encouraged by social policy improvements in childcare (Never 2013).

Religiosity has been robustly linked to family formation, with more-religious people more inclined towards marriage and having children in general (Shulz 2022), more likely to marry directly, and less likely to cohabit beforehand (Thornton, Axinn, and Hill 1992; Eggebeen and Dew 2009). A stronger preference for marriage may reflect fertility aspirations, with higher transition rates to first birth strongly linked to a higher propensity to marry among more-religious women (Lehrer 2004). Religious couples are less likely to have children outside of marriage and more likely to marry early, leading to larger

families (Lappegård, Klüsener, and Vignoli 2014; Peri-Rotem 2016). In Austria, morereligious people are less likely to have children outside marriage and experience union instability than their less religious counterparts, but just as likely to remain permanently single and childless (Berghammer 2012). Religious context may also influence the behaviours of people who are not necessarily highly religious themselves, through the social environment. In Norway, Vitali, Aassve, and Lappegård (2015) find regional spatial variation in childbearing within cohabitation that parallels variation in local support for religiously oriented political parties. In Italy and Poland, where there are Catholic majorities, religion may shape partnering behaviours not because of adherence to religious precepts but because of family traditions and social pressure (Baranowska-Rataj, Mynarska, and Vignoli 2014; Vignoli and Salvini 2014). For example, in Poland, residents of more-religious rural areas are more likely to marry in response to nonmarital pregnancies than residents of less religious areas due to a weaker acceptance of single parenthood in rural areas (Baranowska-Rataj 2014). While secularization and nonmarital fertility have generally grown together in Protestant and Catholic parts of Europe, there has not been a similar growth in nonmarital fertility in either Orthodox countries in Eastern Europe - particularly non-EU countries - that have experienced increased religiosity as a reaction to the collapse of secular regimes, or in the Muslim communities throughout Europe (Klüsener 2015).

5. Conclusion: Emerging themes and future research areas

5.1 Summary

Our paper reviews extant research on the inter-linkage between partnership and fertility and identifies the dimensions of partnership which have clear fertility implications. Having a partner continues to remain strongly predictive of fertility but the relationship has relaxed, particularly for an individual's first coresidential partnership. Although nonmarital fertility has generally increased, among some groups (i.e., the highly educated) or in some countries (i.e., Italy, Spain), marriage nevertheless remains strongly linked with childbearing. While postponement of partnership decreases completed fertility, for some, declines can be offset by changes in other behaviours, such as more rapid parity progression.

Though some evidence shows that re-partnered people desire shared children in their new relationship, which should increase fertility, more evidence seems to point to dissolution lowering fertility by truncating the window of time for having children, especially since not everyone who dissolves a relationship goes on to re-partner. With life courses and relationship trajectories continuing to become more complex, recent

research suggests complexity will ultimately depress fertility instead of increasing it, particularly at the individual level. As multi-partner fertility and family complexity have been associated with socioeconomic disadvantage, the inequalities of 'diverging destinies' may be further exacerbated, widening disparities.

Partnership shapes childbearing behaviours, but the reverse is also true. Pregnancy and children prompt couples to form unions or transition to more formal unions and generally stabilize an existing relationship by increasing the cost of dissolution, but children can also stress a relationship or make it more difficult for single parents to find a new partner. For blended families, stepchildren seem to destabilize relationships, while having a shared child within a stepfamily does the opposite.

Lastly, the role of contextual factors in influencing family structure has a long history (Hajnal 1982; Reher 1998), and over recent decades, comparative research has highlighted how country differences in gender equity and welfare explain patterns of family dynamics (Neyer 2013; Esping-Andersen and Billari 2015; Goldscheider, Bernhardt, and Lappegard 2015; Andreasson et al. 2023). Country context shapes the relationship between partnering and fertility by influencing the costs and benefits of each, over time and space. Country and subgroup differences are driven by variation in secularization, legal context, and welfare state policies, which can incentivise or discourage family decisions. In countries with strong redistributive policies, such as Nordic countries, partnership type is less important for predicting fertility. While the context of Nordic countries is unique, Nordic research has a large presence in the literature due in part to the availability of high-quality administrative data for family research, which is reflected in this review of the literature. Although Nordic research may have limited generalizability, it nonetheless contributes to the development of theories and elucidation of regional trends.

Finally, because race/ethnicity/migrant status are key predictors of family behaviours and the partnership context for childbearing, this leads to racial and ethnic variation in the intersection of partnership and fertility. For instance, if migrants partner differently, their childbearing patterns will also be affected and differentials in partnering will become differentials in fertility. In an increasingly diverse and global world with evolving norms and a growing range of biographies, researchers will need to grapple with cross-national and subgroup variation in tandem with family complexity.

5.2 Emerging themes and future research

This review systematizes the inter-linkages between partnership and fertility dynamics, providing an accessible and up-to-date resource for disentangling these complex relationships. By categorizing these mechanisms according to different partnership

dimensions, we demonstrate how every facet of partnership can influence fertility. In response to increased heterogeneity in demographic trajectories, in the last two decades new methodological approaches such as multistate modelling, sequence analysis, and simulation techniques have been used to analyse partnership and childbearing interlinkages, and how they translate to the population level or explain population-level changes (Thomson et al. 2014; Mikolai, Berrington, and Perelli-Harris 2018; Hart 2019; Raab and Struffolino 2020; Hellstrand, Nisén, and Myrskylä 2022). These methods reveal the importance and added benefit of studying partnership as a sequence of transitions with varying meanings across subgroups and the life course, instead of focusing solely on summary measures such as average age of marriage and first birth.

A number of new themes have emerged in the literature in response to how family biographies have become more diverse and complex. These include (1) the changing role of the first co-residential partnership, (2) the weakening link between partnership and fertility more broadly, (3) the determinants of childbearing across multiple partnerships and socioeconomic differences in the role of cohabitation in the life course, and (4) increased migration, bringing forward the importance of understanding both migrant and ethnic/racial patterns in the intersection of partnership and fertility.

Our review highlights several new themes:

Theme 1: Changing role of first partnership

First coresidential partnerships are no longer about marriage and increasingly may simply be a part of dating. Young people may slide into these first partnerships out of convenience, with the plan that they will eventually end, especially as young adults' transitions to adulthood become increasingly protracted in the context of economic and social uncertainty. While existing work has explored in-depth cohabitation vis-à-vis marriage and how cohabitation is widely accepted as a family form, the new direction of research points toward additionally studying cohabitation as an alternative to dating for emerging younger cohorts. This raises new questions about what cohabitation means as a life event more broadly, outside of its link to marriage and children, and whether first coresidential partnerships continue to hold the same significance as markers of adulthood.

Theme 2: The weakening link between partnership and fertility

Following on from theme 1 and the growing overlap between dating and first coresidential partnership, another emerging theme is the continued delinking of partnership and fertility in general. Childlessness was traditionally associated with lack

of a partner, but nowadays a variety of partnership trajectories are associated with childlessness and partnered fertility has also declined. Traditionally, demographers used the duration since first marriage as a first-birth interval: clearly this is no longer appropriate, given the rise in nonmarital fertility and changing meanings of coresidential partnerships. The purpose of partnerships – especially first partnerships – has less to do with procreation and more with personal satisfaction (Giddens 1992; Beck and Beck-Gernsheim 1995) and increasingly there are partnership experiences that do not produce children or are serial in nature, ending when they are no longer emotionally fulfilling.

Future research requires data that support detailed examination of changing partnership patterns using full partnership histories collected in a way that clearly disentangles cohabitation, intimate relationships, marriage. Moreover, speculation that complexity will be the norm in the future may not be born out: As the youngest cohorts age into adult years, future research will need to substantiate whether current changes persist in the long term, or whether they reflect a period shock as norms shift.

Theme 3: Socioeconomic differences in the role of cohabitation in the life course and its inter-linkage with childbearing

Researchers have extended earlier microeconomic and ideational theories of family change to explain sub-group diversity in the relationship between partnership and fertility, including theories relating to 'diverging destinies' and 'patterns of disadvantage'. The theoretical literature has also responded to the increasing complexity of partnerships by examining the role of children as symbols of commitment and rite of passage (i.e., parenthood and commitment hypotheses) by examining multi-partner fertility. Whether pregnancy occurs in cohabitation or marriage and whether it prompts cohabiters to marry varies by socioeconomic subgroup, reflecting subgroup differences in the meanings of cohabitation which may further drive differences along socioeconomic lines. Certain family behaviours (childbearing within cohabitation, multi-partner fertility) continue to be markers of disadvantage in some contexts but are also on the rise in unexpected places (i.e., Italy), which requires new ideas and theories regarding their drivers and socioeconomic pattern in the future. On the other hand, further ideational change may flatten the educational gradient of family behaviours, such as the risk of marriage in response to pregnancy (i.e., Hungary).

Theme 4: Migrant families and ethnic/race differences

Theories of migrant fertility have been extended to investigate how partnering dynamics explain migrant fertility. Migration, race, and ethnicity will continue to be key parts of understanding partnership and fertility linkages as the United States and countries across Europe continue to become more heterogeneous. In European countries specifically, as migrant status and race begin to blur with second and third generations, new frameworks will need to be developed to understand partnership and fertility dynamics within the context of race and ethnicity in Europe outside of migration, such as minority subculture theories (Mikolai and Kulu 2023). Such frameworks will need to build on existing ideas dominant in the United States, where racial minorities are often not migrants. Inter-ethnic partnerships and mixed religion partnerships and their linkages with fertility will also need to be studied (Van Landschoot, de Valk, and Van Bavel 2017). Integrating an intersectional approach to studies of ethnicity is crucial for future work in an increasingly diverse world. Membership across multiple marginalized subgroups may shape family behaviours and provide opportunities to understand their multiplicative or offsetting effects.

6. Future work

Although outside the scope of this review, future work should study partnership and fertility outside of heterosexual partnerships (i.e., assisted reproductive technology, variety of partnerships – same-sex, non-coresidential relationships). Additionally, assisted reproductive technology within the context of partnership may be particularly important to consider in the future, as it may play a larger role in mitigating the impact of partnership postponement of fertility (Pelikh et al. 2023).

Currently, demographic literature largely focuses on fertility within heterosexual partnerships, often overlooking other types of fertility, due in part to the reliance on survey and register data. Future approaches need to acknowledge these smaller populations in the general study of family demography while also recognizing their differences. Small sample sizes make it difficult to study these groups using survey and register data, so future demographic research will need to focus on innovative approaches toward inclusivity and analysing heterogeneity (Sassler and Lichter 2020).

Furthermore, relatively few studies explicitly address the underlying mechanisms between partnership dynamics and fertility, accounting for the roles of selection, causality, and endogeneity. For instance, findings suggest that marriage is generally more predictive of childbearing than cohabitation. This could be because couples view marriage as the best setting for childbearing or because marriage changes people's

attitudes towards having children (Carioli and Sironi 2020). Alternatively, the association between type of union and fertility could be due to selection: Couples who are in more emotionally and financially stable relationships may prefer marriage over cohabitation and at the same time also be more ready to have children. Future research could more explicitly address selection and causality, employing strategies such as propensity score matching, difference in differences methods, instrumental variables, interrupted survey designs, and machine learning methods.

Further work may also explore what ongoing structural and social change and economic, environmental, and health-related uncertainties mean for the link between partnership and fertility. If state support expands to better assist different kinds of families, will partnership type become less relevant for predicting fertility, making other factors such as partnership duration and timing more relevant instead? If gender equity improves, will the re-partnering and subsequent fertility behaviours of men and women converge, especially if men play a larger role in childcare after separation? If the cost of childcare remains high in countries such as the United States and United Kingdom, or if concerns about climate change and environmental insecurity persist, will we see more people retreat from childbearing, even if they are partnered, further weakening the link between partnership and procreation?

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Appendix

Search strategy

Here, we describe our systematic search strategy and the results. First, we did a keyword search using Scopus, focusing on English language journal articles published between 1990 and 2023, studying Western countries (European countries, the United States, Australia). This yielded 712 articles. We reviewed the titles of the search results and kept those that studied at least one element of partnership, one element of fertility, and the link between the two, leaving us with 52 relevant papers. Second, we reproduced the same keyword search for several key demographic journals - Demographic Research, Population Studies, Population and Development Review, European Journal of Population, Demography - yielding 15 additional articles. Third, we then reviewed the reference sections of this collection of 67 papers, as well as other works that had referenced the papers, for further relevant titles, finding 61 more papers. Fourth, we added 32 final papers based on expert knowledge within the research team and in consultation with colleagues. In this step, some of these works included papers in which the relationship between partnership and fertility was not the main research interest but one of several relationships studied, or was studied within the context of migration, race/ethnicity, different welfare regimes, or religion.

Our literature review examines what kinds of relationships exist between partnership and fertility. Because we do not seek to answer whether something is true or not (i.e., 'Do family policies affect fertility?'), it is inherently less experimental and there is not a clear hierarchy of methods or study quality (i.e., randomized control trials versus retrospective studies). Therefore, we do not group papers by method but instead by the dimension of partnership they focus on and whether they are multi-country or single-country.

Search keywords

Our searches were conducted using the Boolean search phrase (for keywords in the title) TITLE (("union trajectory" OR "union transition" OR "partnership dissolution" OR "partnership instability" OR "second partnership" OR "partnership formation" OR separation OR divorce OR "union formation" OR "partnership trajectory" OR cohabitation OR marriage OR "relationship quality" OR "relationship satisfaction" OR "union instability" OR "multi-partner" OR "stepparent" OR "union dissolution" OR "higher order union" OR "partnership trajectory" OR "multiple partnership" OR "partnership transition" OR "second union" OR "family form" OR "family trajectory"

) AND (fertility OR childbearing OR birth OR motherhood OR childlessness OR "family size" OR postponement OR "age at first birth"))

The Scopus search was limited to peer-reviewed academic journal articles written in English and published between 1990 and 2023. Geographic region was limited to Western countries and included Europe, the United States, and Australia.

Search results

The details of our search results are documented in an additional table, downloadable form the supplementary materials.

Kuang et al.: Changing inter-relationship between partnership dynamics & fertility trends in Europe & the US