Societal Pessimism and the Transition to Parenthood: A Future Too Bleak to Have Children?

Katya Ivanova and Nicoletta Balbo

Contemporary adults often cite economic uncertainty, global warming, and increasing inequality as reasons for intending not to have children. Despite extensive research on the impact of societal pessimism on attitudes towards out-group members, political preferences, and voting behaviors, its impact on demographic behaviors, such as fertility, has received little attention. This study examines the relationship between societal pessimism—captured through individuals' negative perception of the future of the next generation—and their likelihood of becoming a parent. Using data from the Dutch Longitudinal Internet studies for the Social Sciences (LISS), we use discrete-time event history models to estimate the probability of becoming a parent in a given year based on respondents' self-reported negative assessment of the future of the next generation in six distinct areas. Our results demonstrate that perceiving the future of the coming generation as worse than today is associated with a lower probability of becoming a parent. These findings suggest that surveys aimed at understanding fertility behaviors should incorporate questions about individuals' perceptions of the future, in addition to their own contemporaneous conditions.

Introduction

In recent decades, fear and discontent have increasingly become salient traits of Western societies. As the former president of the United Nations Security Council, Kishore Mahbubani, states in the introduction of one of his books, "When many Western eyes peer into the twenty-first century, they see only dark images, not a new dawn in the history of human civilization" (Mahbubani 2009: xviii). More and more, we have been immersed in a "culture of fear" fostered by narratives of fear (politics of fear, fear of

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crime). That experience of fear has been associated with a feeling of generalized anxiety (Furedi 1997; Glassner 1999). In a similar vein, Beck (1992) and Giddens (1990) describe modernity as a "risk society," an era where rapid technological development has been accompanied by the blooming of related anxieties about risks which are not geographically bounded (e.g., nuclear power plant accidents).

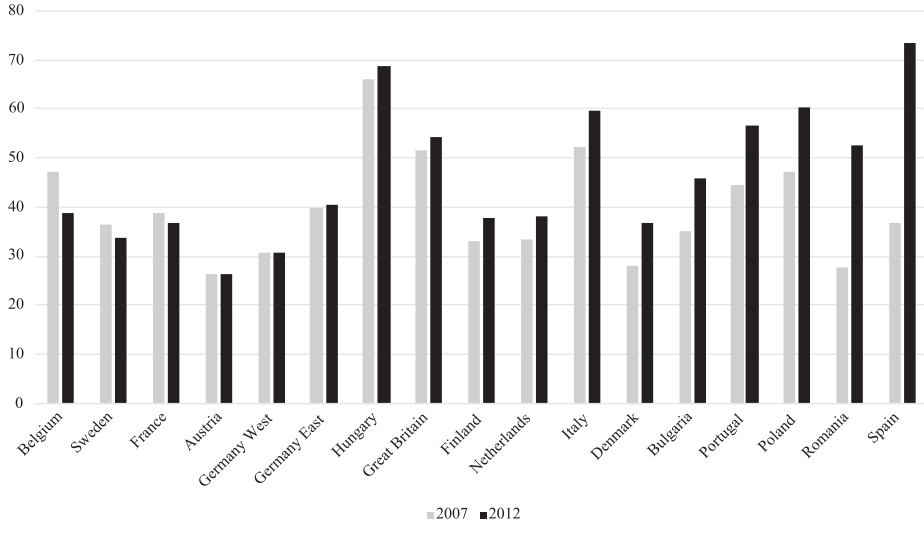
Academic interest in the conceptualization and impact of this general state of discontent has come from a number of fields within the social sciences, more specifically social psychology and political science. In these fields, the feeling of societal pessimism has been described as "a feeling of a generalized negative certainty" (Bennett 2001: 181)—the perception that things are not moving in the "right" direction in society. In this contribution, we argue that societal pessimism is also likely to affect individuals' life course choices. We base our assertion on recent scientific discourse, which has increasingly emphasized how individuals consider not only structural constraints that foster economic uncertainty when making fertility choices but also their own subjective narratives of what the future may hold (Lappegård et al. 2022; Vignoli, Guetto, et al. 2020; Vignoli, Bazzani, et al. 2020). In this paper, we address the following research question: *Does societal pessimism affect fertility behaviors negatively?*

The present paper contributes to the existing literature in three main ways. First, it proposes that societal pessimism is a determinant of fertility. We extend the *narrative framework*—which centers on how individuals envision their own futures (Vignoli, Guetto, et al. 2020)—by adopting a fully forward-looking approach, focusing on the future of the potential child. Although the narrative argument comes close to the idea that societal pessimism may affect fertility, it relies on the concept of an individuals' narratives about their *own* future and not on the fear that a potential parent may feel about the future of their offspring. Our approach acknowledges that in contemporary Western societies, where fertility is viewed more as a matter of personal choice (Zaidi and Morgan 2017), the assessment of the future potential children might face can become part of the investment in child quality, which aims to ensure optimal child outcomes (Becker 1976).

Second, the concept of societal pessimism is a comprehensive and multidimensional one, that goes beyond the view that uncertainty and anxiety about the future are mainly related to financial and economic concerns. At present, contributions which have attempted to incorporate how individuals might reason about a potential future, have almost exclusively focused on perceptions of economic uncertainty (e.g., Comolli 2017; Gozgor, Bilgin, and Rangazas 2021). In this contribution, we consider how individuals envision the future of the next generation with respect to a wider set of potential outcomes (financial as well as social).

Third, in studying the relationship between societal pessimism and fertility we, for the first time, look at fertility behaviors and not at intentions,

FIGURE 1 Societal pessimism: percent of people saying that things are going in the wrong direction in their country. Weighted data from the Eurobarometer Survey 2007 and 2012



as the existing literature using a similar approach does (e.g., Lebano and Jamieson 2020; Guetto, Bazzani, and Vignoli 2022). In other words, we assess the role of pessimism in actual, realized behaviors.

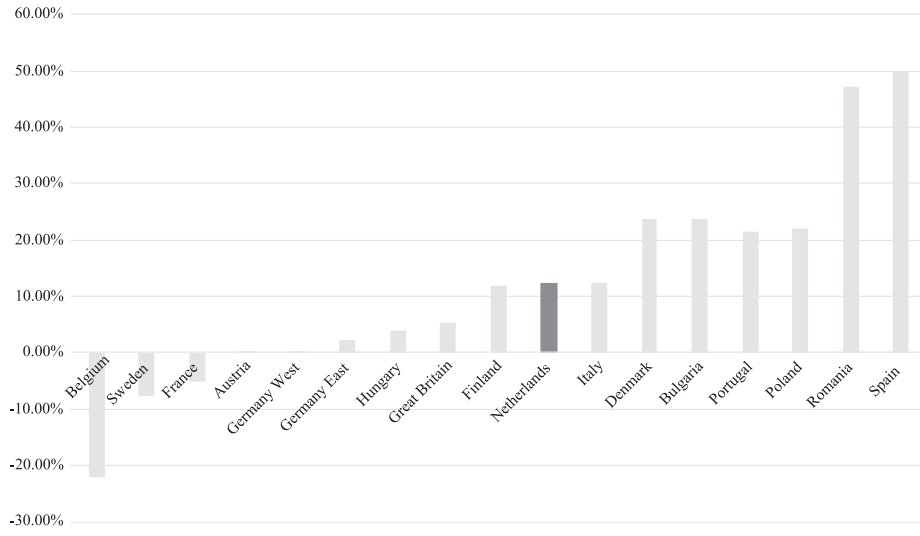
Background

Societal pessimism

In the existing literature on societal pessimism there is a general consensus that this perception of the future is distinct from assessments of one's own personal situation. In fact, empirical research has shown that people tend to be much more optimistic about their own chances of success and happiness than about the chances of generalized others, a phenomenon dubbed the "optimistic bias," "unrealistic optimism," and the "optimism gap" (Chapin 2000; Whitman 1998).

In the past decades, societal uncertainty has increased due to external factors such as the Great Recession and the Covid-19 pandemic (Comolli and Vignoli 2021), potentially leading to a pessimistic outlook on the future of society. This negative perception of the future can result in rising pessimism about the state of the world for the next generation. Analysis of the Eurobarometer data from the years surrounding the Great Recession (2007 and 2012) shows that in some European countries, individuals experienced a notable increase in pessimism during this period. As seen in Figures 1 and 2, the majority of European countries represented in the Eurobarometer exhibit an increase in the percentage of people who believe that things

FIGURE 2 Percent change in societal pessimism between 2007 and 2012. Weighted data Eurobarometer Survey 2007 and 2012



are heading in the wrong direction in their country during the recession period. Interesting to point out is that the Netherlands, our study context, did not experience a very pronounced increase in societal pessimism, which may be due to the lesser impact of that crisis. Therefore, our analysis may actually present a conservative estimate when considering the broader European context.

At present, societal pessimism has been captured empirically with questions such as "At the present time, would you say that, in general, things are going in the right direction or in the wrong direction, in [COUNTRY]?" (European Parliament 2021) and "The way things are now, I find it hard to be hopeful about the future of the world" (European Social Survey 2012). Unfortunately, both of these data sources are cross-sectional and not designed with a focus on family-related behaviors in mind, which makes them impossible to use for the prospective study of demographic behaviors such as fertility. Crucially, this question is often—if not exclusively—presented as part of a battery of questions aimed to capture respondents' political views and attitudes, thus potentially priming participants to think about (recent) political decision-making.

In our contribution, we depart from the assertion that in societies where the norm of involved parenting is strong and where much of parenting is organized around the ambition of ensuring children's success (Milkie and Warner 2014), the best way to capture societal pessimism is through individuals' assessments of how societal conditions for the *next generation* compare to the present (ranging from "much better than today" to "much worse than today"). We explore multiple dimensions that can affect the

living standards of the next generation, such as the environment, social life, employment or housing opportunities, and social mobility.

Societal pessimism and fertility

At present, attempts to understand the consequences of societal pessimism have very clearly focused on how it might impact attitudes towards outgroup members such as migrants, as well as, political preferences and voting behaviors, in particular for populist parties (e.g., Steenvoorden and Harteveld, 2018; van der Bles et al., 2018). We argue that societal pessimism can also impact demographic behaviors such as fertility. This assertion can be seen as related to arguments that how individuals see their *own* future—whether that will be in terms of the expected happiness from being parents (Billari 2008) or in terms of the costs and rewards they associate with parenthood (Liefbroer 2005)—is related to their fertility behavior.

Societal pessimism extends beyond individuals' current experiences and, instead, centers on one's vision of the direction in which societies are developing. This future orientation is more closely centered on the imagined reality that potential children may face. Therefore, it is crucial to recognize that people generally expect their children to fare better than, or at least as well as, themselves (Chetty et al. 2017). Moreover, in the last couple of decades, advanced societies have witnessed the diffusion and deepening of the intensive parenting norm (Nomaguchi and Milkie 2020). That ideology is based on the assumption of parental determinism, according to which parents' actions, behaviors, and consistent involvement determine children's development (Milkie and Warner 2014). If, however, societal conditions undermine parents' attempts to secure children's success, fertility is likely to decrease. This assertion is grounded in theoretical models that argue that with increasing affluence, the quantity–quality trade-off in childbearing shifts, placing more emphasis on child "quality"—including their expected well-being—in decision-making (Becker 1976). Therefore, especially in the Netherlands, where voluntary childlessness is increasingly socially acceptable (Noordhuizen, de Graaf, and Sieben 2010), and the use of contraceptives is widespread (Marra, Meijer, and de Graaf 2020), it is expected that these imagined futures will shape adults' fertility intentions and behaviors.

Based on these arguments, we anticipate that higher societal pessimism is associated with a lower risk of becoming a parent in a given year. Because our work focuses on the negative perception of the future of the next generation and not on the future of the individual making the choice to have a child, we also empirically validate the measure we used in our analysis to make sure that what we are capturing is indeed pessimism about the future of the coming generation. Specifically, as described in the Method section and the Supporting Information online, we engaged in a new, ad

hoc data collection in 2020, in which we measured both concerns about own future and about the next generation's future.

Method

Data and analytical sample

We use data from the Dutch Longitudinal Internet studies for the Social Sciences (LISS) panel, which is administered by CentERdata at Tilburg University, the Netherlands (https://www.dataarchive.lissdata.nl). LISS is based on a true probability sample of independent private households. The sample frame utilized is the nationwide address database maintained by Statistics Netherlands. This compilation of records, encompassing both an address and a municipality code, is created annually by Statistics Netherlands through the random selection of a 10 percent sample from the population registers known as GBA (Gemeentelijke Basisadministratie). Initial recruitment for the panel took place in 2007. In collaboration with Statistics Netherlands, a basic random sample comprising 10,150 addresses was selected from the previously mentioned address database. First contact was established through an announcement letter which included a 10-euro unconditional incentive. Subsequently, they were contacted by an interviewer either by phone (if such was known) or were visited for a face-to-face interview.

During this first conversation, a request to participate in the LISS panel was made. In the cases when participation was not possible otherwise, a computer and Internet connection were provided. Of the total gross sample, 48 percent registered in the panel. Compared to national statistics provided by Statistics Netherlands, single persons, people over the age of 65, university-educated individuals, people living in regions with the highest and lowest levels of urbanization were underrepresented at the start of LISS in 2008 (Knoef and de Vos 2009). As part of their participation, the respondents complete surveys online every month, with questionnaires on several core domains (e.g., family and household, personality, economic situation) fielded once a year. The participants are compensated financially for their time. The response attrition is about 12 percent per year, and regular refreshment samples are added to the LISS to correct for this attrition. For further details on the LISS panel, response, and attrition rates, please see Scherpenzeel (2009, 2011), Scherpenzeel and Bethlehem (2011), and Scherpenzeel and Das (2011).

Our analytical sample was chiefly determined by the availability of data from the "Initial Questionnaire" module of LISS, which is the first questionnaire administered to newly starting LISS panel members. This questionnaire is completed only once—when an individual joins the panel. As of 2010, this module also included 18 questions addressing the participants' beliefs about the living conditions of the coming generation. A total of 7,911

individuals filled out this survey between 2010 and 2021 (the final year for which we had data on fertility transitions was 2022). However, our analytical sample was restricted by several considerations related to the fact we were interested in how societal pessimism might be linked to the transition to parenthood.

Foremost, given that we wanted to explore prospective fertility transitions, we had to focus on participants who still had time left within their possible "reproductive window" at the time of the "Initial Questionnaire." We, therefore, chose to focus on women who were younger than 40 and men younger than 45 at their entry into LISS. This step limited our sample to $n = 4{,}429$. The second important consideration was that these respondents needed to have provided information in at least two "Family and Household" modules, as information about changes in parenthood status was derived from these annual questionnaires ($n = 2{,}525$). Given this drop in the analytical sample, we compared the participants with a single "Family and Household" participation to those with multiple measures. We found no gender differences between the two groups or differences with respect to the highest achieved level of education at the first observation. Statistically significant differences between the groups were found with respect to (1) age (single fertility measure: $M = 27.9$, $SD = 7.69$; multiple fertility measures: $M = 27.1$, $SD = 8.26$); (2) self-reported depressive symptoms at first observation (further elaboration on the measure is provided below; single fertility measure: $M = 2.62$, $SD = 0.85$; multiple fertility measures: $M = 2.55$, $SD = 0.84$); (3) satisfaction with income at first observation (further elaboration on the measure is provided below; single fertility measure: $M = 5.91$, $SD = 2.19$; multiple fertility measures: $M = 6.17$, $SD = 2.02$). Most importantly, however, the two groups did not differ on self-reported societal pessimism (single fertility measure: $M = 4.01$, $SD = 0.92$; multiple fertility measures: $M = 4.02$, $SD = 0.90$).

The final step in defining our analytical sample, given our focus on the transition to parenthood, was to select respondents who were not parents at their entry into LISS ($n = 1{,}807$). These participants were observed an average of 5.89 times ($SD = 2.50$). Descriptive information about the sample is provided in Table 1.

Measures

Societal pessimism. Our key predictor of interest was operationalized using 18 questions from the module "Initial Questionnaire" (distributed at entry into the LISS panel, starting in 2010). The respondents were presented with the following instructions, "You will first see six screens, each one displaying three areas of life for which you are asked to indicate how you believe the living conditions will be for the coming generation." The response scale ranged from 1 = *much worse than today* to 7 = *much better than today*, with

TABLE 1 Descriptive statistics and valid number of observations

	Mean	*SD*	*n*
Societal pessimism (future of next generation is 1 = *much better than today*, 7 = *much worse than today*)	3.97	0.91	1,807
Age at first observation	24.10	7.22	1,798
Has a partner at first observation	0.49		1,807
Female	0.54		1,798
Year of entry into LISS[a]			1,807
2010–2012	0.18		
2013–2015	0.32		
2016–2018	0.34		
2019–2021	0.22		
Educational attainment at first observation	3.23	1.82	1,802
Measures used for validation of key independent variables (all captured at entry into the panel)			
Satisfaction with income (0 = *not satisfied at all* to 10 = *entirely satisfied*)	6.10	2.02	1,773
Depressive feelings (1 = *low* to 6 = *high*)	2.61	0.85	1,759
Agreeableness (range 1–5)	3.82	0.55	1,770
Extraversion (range 1–5)	3.28	0.71	1,770
Conscientiousness (range 1–5)	3.54	0.58	1,770
Emotional stability (range 1–5)	3.08	0.58	1,770
Openness (range 1–5)	3.61	0.51	1,770

[a] Does not add up to 1.0 because of rounding off.

a clearly defined mid-point of 4 = *the same as today*. The respondents could also indicate "I don't know" (which we coded as missing). The six screens covered the following topics: social relationships (e.g., stability of love relationships), financial future (e.g., purchasing power), social mobility and inequality (e.g., housing), paid work (e.g., employment opportunities), well-being (e.g., sense of well-being), and physical environment (e.g., water and air quality). The full list of items is shown in the Supporting Information online.

As this measure has not been used previously in work on fertility transitions, we ran a number of additional checks within the sample of reproductively aged adults. The main concern can be that what we are capturing is not the respondents' assessment of the future of the *next* generation but rather the assessment of their own future or another (stable) personal disposition. We tried to address this concern in two ways. Foremost, we collected additional data in August–September of 2020, which asked a selection of LISS respondents how they saw their own future and the future of the coming generation. The findings of that check are displayed and discussed at length in the Supporting Information online. Given the high correlation between the assessment of own future and the future of the next generation with respect to "physical environment," we

chose to omit this subscale from the composite measure which was created by taking the average of the other 15 items. Additional analyses using the full 18-item scale rendered similar findings (displayed in the Supporting Information online). The additional data collection also included a single question on self-rated risk proneness/aversion. The associations between that measure and the assessment of own future and the future of the next generation are discussed at length in the Supporting Information online. That check clearly demonstrates that whereas risk proneness is negatively associated with pessimism about *own* future (correlations ranging from −0.11 to −0.21), the association with the items related to the future of the next generation is decidedly weaker (ranging from −0.04 to −0.13).

Second, we used the data from the "Initial Questionnaire," in combination with other LISS modules in which the respondent participated in the same year. This allowed us to calculate the correlation between the pessimism measure and self-reported depressive feelings and satisfaction with own financial situation (i.e., "How satisfied are you with your financial situation?," 0 = *not satisfied at all* to 10 = *entirely satisfied*). Depressive feelings were operationalized by presenting the respondents with five items (e.g., I felt depressed and gloomy) and asked to indicate the answer that best described how they felt in the past month on a scale from 1 = *never* to 6 = *continuously*. Descriptives of these measures for our analytical sample are presented in Table 1. Though the measures were not all assessed within the same questionnaire, they were assessed in the year when the respondent joined the panel. The correlation between societal pessimism and depression was 0.11 ($p < 0.01$) and −0.11 ($p < 0.01$) with satisfaction with own financial situation. While these correlations are in the direction that one can reasonably expect, they are not large enough to argue that our pessimism measure captures something akin to mental well-being or assessment of own financial future.

Additionally, we explored the correlation between the measure and the participants' personality characteristics. Here, we used the self-reported personality characteristics of the respondent (using the annual LISS model "Personality," which includes the 50-item version of the IPIP Big Five inventory; Goldberg 1992). The five overarching personality characteristics, captured in the IPIP Big Five inventory, can be described as follows: *extraversion*—a tendency to be active, dominant, and social; *agreeableness*—a tendency to be friendly, warm, and considerate; *conscientiousness*—a tendency to be goal oriented, achievement seeking, and self-disciplined; *emotional stability*—a tendency not to get worried easily, less emotionally reactive, emotionally stable; *imagination/openness*—a tendency to be intellectually curious, open to new experiences. Descriptives of these measures for our analytical sample are presented in Table 1. As could be anticipated, the highest correlation between any of these dimensions and our measure of societal pessimism was with emotional stability (which can be

understood as the opposite of *neuroticism*). Still, that correlation was weak ($r = -0.09$, $p < 0.01$), which lends support to the assertion that what we are capturing is not just a (stable) personality disposition.

Another concern about this measure and specifically that it was reported only at entry into the LISS panel can be that the responses are impacted by the economic and social conditions at the moment when the respondent joined LISS (i.e., period effects). Figure A1 in the Supporting Information online displays the mean and standard deviation of the pessimism measure, plotted across the years in which the respondents joined the LISS panel and thus completed the "Initial Questionnaire." What this figure demonstrates is that there is no year in which the assessment of the future of the next generation was particularly negative or positive. This gives us confidence that the results are also not driven by a period effect, where the respondents who joined LISS during a particularly difficult period (e.g., during an economic downturn in the Netherlands) were also less likely to have a child because of contemporaneous social conditions. Still, our models do include a control for the year of entry into the panel (and thus—year of having filled out the key questionnaire).

These checks give us confidence that our measure does in fact tap into the participants' general assessment of the living conditions of the coming generation. The scale was recoded so that higher value corresponded to the expectation that the future of the coming generation will be much worse than today (across the years, the reliability of the full scale ranged from $\alpha = 0.86$ to $\alpha = 0.92$).

Parenthood transition. Our dependent variable was constructed based on the self-reported parenthood status in the annual "Family and Household" module of the LISS. This is a dynamic measure, updated at each wave of observation, depending on whether the respondent reported being a parent or not. In total, in our analytical sample, we observed 262 transitions to parenthood.

Time-varying control variables. In our analyses, we controlled for the time-varying age of the respondent (and age squared) and whether the respondent has a partner (0 = *no*, 1 = *yes*). Both of these measures were lagged by a year and thus, capture the respondent's status at t–1.

We fully recognize that multiple other time-varying covariates can be entered (e.g., current employment status). However, it is important to recognize that our ambition is not to explain why societal pessimism might be linked to fertility transitions (by, e.g., impacting the choices that individuals make with respect to other areas of their lives). What we aim to ascertain in our work is whether an association can be found between a generalized perception of the future that the next generations might face and individuals' transition to parenthood.

Time-invariant control variables. In addition to the time-varying controls outlined above, we also accounted for gender (0 = *male*, 1 = *female*) and the year when the respondent joined the panel (and thus, provided answers to the questions about the perceived future of the next generation). Finally, though we did not control for *time-varying* educational attainment, we controlled for the highest level of education at first observation (i.e., at time of societal pessimism measure). This educational attainment was captured using the categories of Statistics Netherlands ranging from 1 = *primary school* to 6 = *university*. Here, it is important to mention again that these time-invariant control variables were captured at entry into the panel (i.e., up to 12 years prior to potential final observation).

Analytical approach

We used discrete-time event history analysis to model fertility transitions (Allison 1982; Steele 2008). We created a person-period file, in which each row corresponded to a wave when the respondents reported on their parenthood status and the number of children. Respondents "entered" observation at the age of 20 (as only about 2 percent or less of Dutch women make the transition to parenthood during their teenage years and thus constitute a very select group; CBS, 2022) and were observed until the age of 45 for women and 50 for men (and were then censored). We estimated random-effects logistic regression models (with years of observation nested in individuals; Steele, Clarke, and Washbrook 2013) in order to examine the link between the respondents' assessment of the future (as reported at entry into the LISS panel) and their likelihood to have a child in a given year.

Results

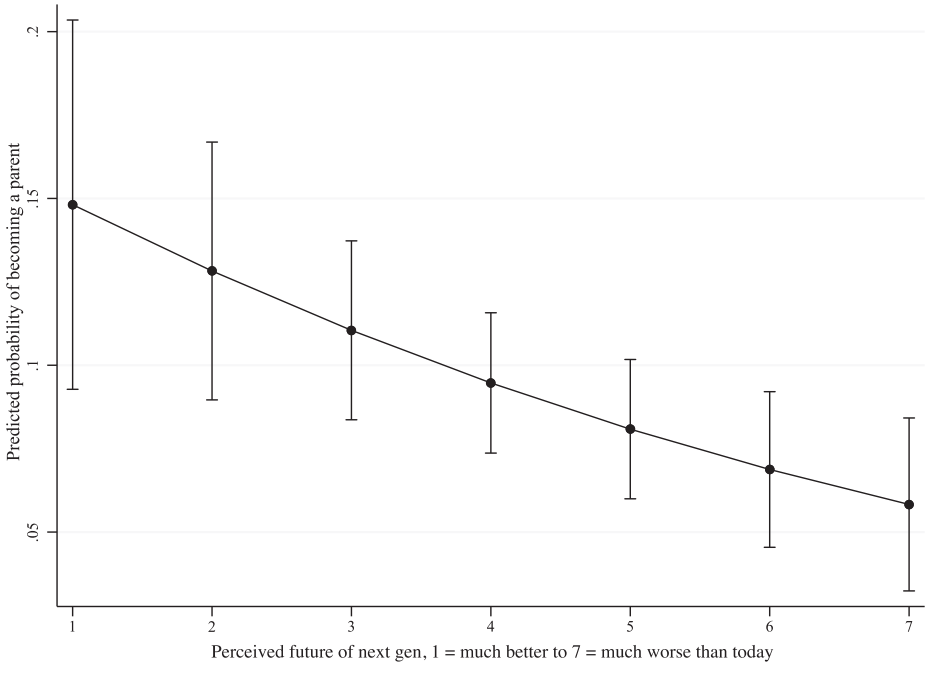
The findings of our discrete-time event history models are displayed in Table 2. As can be seen in that table, scoring a point higher on the societal pessimism scale was associated with a decrease in the hazard of making the transition to parenthood in a given year. This effect was found while controlling for time-varying characteristics such as the age of the respondent (and age squared) and whether the respondent had a partner at the previous observation. To provide the readers with an impression of the magnitude of the effect, we have plotted the predicted probabilities of making the transition to parenthood in a given year, across the full range of the societal pessimism measure. As can be seen in Figure 3, whereas the predicted probability was 0.09 when the respondent scored at the midpoint of the scale (i.e., they perceived the future of the next generation to be comparable to the current situation), that probability was 0.15 when that future was perceived as "much better than today" and 0.06 when the future was perceived as "much worse than today."

TABLE 2 Discrete-time event history models of the annual probability to make the transition to parenthood based on the respondent's assessment of the future of the coming generation

	Model 1: with composite measure				Models with separate subscales[a]			
	Coefficient	SE	95% CI		Coefficient	SE	95% CI	
Societal pessimism	−0.18*	0.07	−0.32	−0.05				
Subscales of societal pessimism								
Social relationships					−0.13*	0.05	−0.24	−0.02
Financial future					−0.13*	0.05	−0.23	−0.03
Social mobility and inequality					−0.09	0.06	−0.21	0.03
Paid work					−0.12*	0.06	−0.23	−0.002
Well-being					−0.08	0.06	−0.19	0.04
Time-varying measures (lagged: *t*–1)						*included*		
Age	1.26**	0.15	0.97	1.55				
Age squared	−0.02**	0.00	−0.02	−0.01				
Has a partner	1.97**	0.23	1.52	2.43				
Time invariant (captured at first observation)						*included*		
Female participant	0.27*	0.13	0.01	0.54				
Year of entry into the panel	−0.10**	0.03	−0.15	−0.05				
Educational attainment	0.06	0.05	−0.04	0.16				
Interclass correlation (rho)	2.52e−06	0.000						
Constant	181.59**	50.44	82.74	280.45				

[a] A separate model is estimated with each of the subscales. In the interest of brevity, the coefficients are displayed in a single column. All models include the same controls as Model 1.
*$p < 0.05$, **$p < 0.01$.

FIGURE 3 Predicted probability of becoming a parent in a given year at varying levels of societal pessimism (Model 1, Table 2). Estimated for a woman who had a partner at *t*–1, with educational level = 3, and filled out the Initial Questionnaire in 2011 (age at the mean of the sample)



As an exploratory step in our analyses, we estimated our model separately for each of the subscales of the societal pessimism measure. The results per subscale can be found in Table 2. As can be seen in that table, all of the subscales are negatively associated with the annual probability of becoming a parent. However, only three of the subscales reach statistical significance, namely: "social relationships" ($p = 0.015$), "financial future" ($p = 0.012$), and "paid work" ($p = 0.045$). Given that two of these scales can be seen as related to financial concerns and one is related to the respondent's vision of close relationships, we estimated an additional model, where we controlled for the self-reported satisfaction with own financial situation and level of depression at the moment when societal pessimism was measured (as described in the Measures section). The results with respect to the composite measure remain unchanged and can be found in Table A2 in the Supporting Information online.

The final explorative step in our analyses was to estimate our main model separately for men and women. It is important to note here that given the number of observed transitions within the full sample ($n = 262$), these split-by-gender analyses should be examined with caution. In our analytical sample, 146 of the events were reported by a female and 116 by a male

respondent. The results are displayed in Table 3. As can be seen in these models, it appears that though societal pessimism is negatively associated with the annual probability of becoming a parent for both men and women, that relationship is statistically significant only for women. We would like to restrain from overinterpreting this result given the limited power. However, this finding appears to be in line with some qualitative work showing that environmental and population-growth concerns, for example, are a childfree motive more often mentioned by women rather than men when discussing reasons not to have children (Park 2005).

Discussion

This contribution set out to examine whether societal pessimism—captured through individuals' assessment of the future of the next generation—is associated with fertility behaviors. Thus far, the empirical focus in the study of repercussions of societal pessimism has largely been on how this phenomenon is related to attitudes towards out-group members and their voting behaviors (e.g., Steenvoorden and Harteveld, 2018; van der Bles et al., 2018). Departing from arguments about the importance of expectations and visions about the future for demographic behaviors (Vignoli, Guetto, et al. 2020; Vignoli, Bazzani, et al. 2020), we formulated the hypothesis that those who report higher societal pessimism will be less likely to make the transition to parenthood. The analyses of Dutch panel data provided support for this expectation. Two main conclusions can be drawn from our work.

Foremost, we demonstrate that expectations about the future matter when it comes to actual fertility behaviors. Undeniably, ample previous research has already shown that expectations about the impact of children on one's own life (e.g., career, relationship with a partner) and (mental) well-being play an important role in the decisions that people make with respect to having (additional) children (e.g., Billari, 2008; Liefbroer, 2005). What we show, however, is that the effect of those imagined futures is not limited to the impact that children might have on one's *own* life. What appears to make a difference in the decision-making process is also the (potential) parents' vision of the future that the next generation—in other words, their children—could face. The discussion of how people's perceptions of the future of humanity impact their fertility intentions has been very prominent in popular news outlets in recent years (e.g., Hunt 2019; O'Grady 2019). Some empirical work has also examined how environmental concerns in particular are related to fertility *intentions* and attitudes towards having children (e.g., Arnocky, Dupuis, and Stroink 2012; Helm, Kemper, and White 2021; Wesolowski 2015). Our work goes a step further to show that preoccupations with the future the next generation could face are actually associated with the realized fertility behaviors of people.

TABLE 3 Discrete-time event history models of the annual probability to make the transition to parenthood based on the respondent's assessment of the future of the coming generation, split by gender

	Women				Men			
	Coefficient	***SE***	**95% CI**		**Coefficient**	***SE***	**95% CI**	
Societal pessimism	−0.22*	0.09	−.41	−.04	−0.14	0.10	−0.35	0.06
Time-varying measures (lagged: *t*–1)								
Age	1.40**	0.24	0.94	1.87	1.22**	0.21	0.80	1.64
Age squared	−0.02**	0.00	−0.03	−0.01	−0.02**	0.00	−0.02	−0.01
Has a partner	1.70**	0.28	1.15	2.25	2.42**	0.43	1.58	3.25
Time invariant (captured at first observation)								
Year of entry into panel	−0.09**	0.03	−0.16	−0.02	−0.11	0.04	−0.19	−0.04
Educational attainment	0.11	0.07	−0.02	0.25	−0.03	0.07	−0.18	0.11
Interclass correlation (rho)	7.75e–07	0.000			2.55e–06	0.000		
Constant	157.30**	68.15	23.73	290.87	204.33	74.85	57.62	351.03

NOTE: A separate model is estimated with each of the subscales. In the interest of brevity, the coefficients are displayed in a single column. All models include the same controls as Model 1.

*$p < 0.05$, **$p < 0.01$.

Our second key point is that while the link between societal pessimism and fertility is mainly driven by financial and work-related worries, it is also noteworthy that anxieties about the future of social relationships, in general, play a role. Undeniably, recent years have seen an increasing recognition that perceived uncertainty, and especially economic uncertainty with respect to *own* prospects, depresses fertility (e.g., Goldstein et al. 2013; Comolli 2017; Matysiak, Sobotka, and Vignoli 2021). Therefore, our findings about the perceived future of the next generation with respect to financial leeway and paid work may appear as not necessarily surprising. However, what our work demonstrates is that pessimism about the quality of interpersonal relationships can also have important repercussions for individual fertility-related behaviors. We argue that this further strengthens the assertion that in a climate where parenthood may no longer be strongly normatively mandated (Noordhuizen, de Graaf, and Sieben 2010), contemplating the future prospects and well-being of children—factors that extend beyond just fulfilling their basic material needs—becomes an even more critical consideration when deciding whether to have them.

Though we are able to demonstrate that individuals' perceptions of the future of the next generation are indeed related to subsequent fertility transitions, our work has limitations that should be kept in mind. Foremost, our operationalization of "societal pessimism" is not based on a well-established measure which has been used extensively in empirical research. Though the face validity and internal consistency of the scale are reassuring, we cannot state with certainty that what we are capturing is a generalized negativity about the future of the *next* generation, rather than an assessment of one's own (distant) future. Our additional data collection and robustness checks indicate that though correlated, the assessment of one's own future and the assessment of the future of the next generation are distinct. Importantly, given the wealth of information in the Dutch LISS panel, we were also able to assess the association between our pessimism measure and the respondents' contemporaneous financial and socio-emotional well-being, as well as—the association with more stable personality characteristics such as neuroticism. These checks demonstrated that what we were capturing with our measure was a distinct construct. Yet, we do believe that it is important to investigate further, possibly informed by qualitative data collections, what the most accurate manner might be to capture individuals' general visions of the future.

Also important to note here is that though we examine the association of societal pessimism with fertility behaviors, we certainly do not address the question as to what the predictors of those negative perceptions might be. What we demonstrate is that "societal pessimism" was not simply a proxy for poor mental health or general dissatisfaction with one's own financial situation. However, our work does not address the issue of what the ultimate causes of this pessimism and thus, suppressed fertility

transitions, might be. An interesting question here is whether the assessment of the future is in fact more strongly affected by changing societal conditions or rather—by factors related to one's own (family) history (e.g., downward social mobility).

A final point that we would like to make is that we certainly do not aim to test the precise mechanism through which societal pessimism is related to fertility transitions nor can we ascertain whether final completed fertility is suppressed by the phenomenon of interest. As we do not aim to test mechanisms, we did not include an elaborate set of time-varying controls in our models, as we believe that those are more appropriate to capture the pathways through which the two phenomena are related to each other. It also remains to be seen how individuals' final completed fertility (and most importantly—whether or not they remain nonparents by the end of their reproductive window) is related to negative perceptions of the future of the next generation. What we show is that the annual probability of making the transition to parenthood is lower for those with higher societal pessimism. At the same time, given that we know that postponing fertility transitions is linked to lower completed fertility (Mills et al. 2011), our findings are important in light of dropping fertility rates across the Global North.

What this work demonstrates is that our discussion of how people reason about having children should now more consistently include a consideration of what future individuals imagine their potential children might face. That has two relevant implications and takeaways, one on a more theoretical level and the other on an empirical one. First, in defining the role of uncertainty in the fertility decision-making, we need to take into account that individuals might experience the latter on both a more personal level and in a more generalized way. Second, we need to consider that data collections which are oriented towards understanding fertility behaviors must expand the repertoire of survey questions that they systematically include and go beyond assessments of adults' own contemporaneous social and economic conditions.

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Data availability statement

In this paper, we make use of data from the LISS panel (Longitudinal Internet studies for the Social Sciences) managed by the nonprofit research

institute Centerdata (Tilburg University, the Netherlands). The data archive can be accessed via https://www.lissdata.nl/use-the-data. The data files for the analyses displayed here were downloaded in September 2023.

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