

Chapter 7

Variation in U.S. Fertility: Low and Not so Low, but Not Lowest-Low

S. Philip Morgan

In a discussion of low fertility and population aging, the United States stands out with a level of fertility hovering around the replacement level (substantially higher than that of most economically advanced countries) and a corresponding, modest pace of aging. As a result, government policy is not directed toward increasing or decreasing overall levels of fertility (United Nations 2011). Thus to contribute to a discussion of below-replacement fertility, the most relevant questions are: What accounts for the relatively robust U.S. fertility rate? And how does the U.S. experience contribute to our understanding of the determinants of low and very low fertility in other contexts?

We address these questions by describing fertility levels and variation in the United States. For some groups, fertility is quite low, well below replacement. Other groups have fertility well above the replacement level. In order to understand this variation, we begin by introducing two compatible theoretical frameworks. The first posits a set of intermediate variables: the level of desired/intended fertility and factors that constrain (e.g., sub- or infecundity) or augment (e.g., unwanted fertility) fertility relative to these intentions. These “intermediate” variables (that characterize a “fertility regime”) are anchored in culture and social structure, and we also offer a conceptualization of these more distal causes. Both frameworks aid discussions of low fertility in the United States and, I argue, are useful for thinking about low fertility and policy options in all contexts.

S.P. Morgan (✉)

Carolina Population Center and Sociology Department, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA

e-mail: pmorgan@unc.edu

Conceptual and Theoretical Frameworks

The usefulness of intermediate-variable frameworks for the study of fertility is unquestioned. Bongaarts and Potter's (1983) and Bongaarts' (1978) proximate-determinant frameworks proved valuable for conceptualizing and empirically decomposing the causes of high fertility and the fertility transition.¹ Once fertility falls to moderate or low levels, however, the Bongaarts/Potter model is much less useful. The reason is that in low-fertility contexts the fundamentally important proximate determinants are always contraception and abortion. This makes other aspects of the Bongaarts/Potter model (such as the biological maximum fertility level and length of breastfeeding) largely irrelevant. Thus, in economically developed contexts, low fertility is the result of persons' desires to have small families and the use of contraception and abortion.

Bongaarts (2001) proposed an alternative model that we have found very useful for studying low fertility and its variations. This model has two broad components: (1) the desired family size characterizing a population; and (2) the factors that either enhance or reduce aggregate fertility relative to these fertility preferences. As described by Bongaarts (2001, see Figure 4 and discussion), this model could be useful at early stages of the fertility transition. He points out that early in the fertility transition, fertility often exceeds desired family size. On the other hand, once fertility falls to low levels, the opposite is often the case—desired levels of childbearing exceed the levels observed. We explore this later case. Once the fertility transition is well underway, individuals are explicitly strategizing about appropriate family size, and birth control is widespread. Specifically, this model has proven useful as a conceptual model (for instance, many articles have focused on single components of this model—the effects of tempo, desired family size, or unwanted fertility) and occasionally as a general framework for studying low fertility (see Morgan et al. 2009; Morgan and Rackin 2010; Dharmalingam et al. 2014).

As noted above, the low-fertility model has at its core the incongruence between population-level stated preferences and actual observed fertility (Bongaarts 2001; Morgan and Taylor 2006). The framework can be represented as in Eq. (7.1):

$$\text{TFR} = \text{DFS} * (\text{F}_U * \text{F}_R * \text{F}_{\text{SP}}) * (\text{F}_T * \text{F}_I * \text{F}_C) \quad (7.1)$$

Aggregate period fertility, the total fertility rate (TFR), equals women's desired family size (DFS) increased or decreased by factors and circumstances that are not or cannot be incorporated when women report their childbearing desires. If all women realized their DFS (and if tempo distortions were eliminated; see Bongaarts and Feeney 1998), then period fertility would equal DFS. The factors that increase fertility relative to desires are: unwanted fertility (F_U), replacement of child deaths (F_R), and gender preference (F_{SP}), which in the case of the United States is a preference for a son and a daughter. The effects of these factors in Eq. (7.1) would be

¹ Bongaarts and Potter (1983) build on the classic Davis and Blake (1956) framework.

greater than 1.0, and thus they increase fertility relative to desires (Hagewen and Morgan 2005; Dharmalingam et al. 2014). The factors that decrease fertility relative to desires are the tempo effect of fertility postponement to later years/ages (F_T), sub- or infecundity (F_I), and desires/intentions that compete with the desire for children (F_C) (Bongaarts 2001). These factors would be expected to have values of less than 1.0 in Eq. (7.1), and thus they decrease fertility compared with intentions. In the United States, aggregate intentions approximate the TFR, and both are near replacement. This is because factors that increase and decrease fertility relative to intentions are largely offsetting, not because most women individually realize their desired family size (Morgan and Rackin 2010). In most developed countries, intentions approximate replacement, but actual fertility falls far short of the replacement level (Bongaarts 2001; Hagewen and Morgan 2005). This is true because factors reducing fertility relative to intentions are stronger than factors that raise fertility.

Equation (7.1) can be used to capture the “fertility regime” in a particular population (see Morgan 2003; Morgan and Hagewen 2005; Dharmalingam et al. 2014). On the left, the TFR captures the level of actual fertility and, on the right are intermediate variables that produce this level. The fertility regime for the United States as a whole is estimated in Morgan and Hagewen (2005): Replacement-level fertility is produced by preferences for small family sizes with a general reluctance to be childless or to have only one child. These preferences, modestly above the replacement level, are augmented by: (1) high levels of unplanned pregnancies and unwanted births (i.e., they increase the TFR by 10–15 %); and (2) very modest effects of additional births to balance the gender composition of offspring (having an additional child to have a daughter or son increases fertility by about 2 %).

Opposing forces reduce fertility relative to intentions. To explain, the timing of childbearing is relatively young (compared with the situation in many European countries), but it has been increasing steadily for more than three decades. This fertility postponement has lowered the TFR by about 10 % over the period that age at childbearing was increasing. Later ages at childbearing lead to “fertility foregone” because of sub- and infecundity (reduces the TFR by 2–4 %) and because of competition between fertility and other valued activities that becomes more intense or more visible as persons age. This second factor (competition) is difficult to estimate, but the “residual” produced by assuming that this factor equals 1.0 (no effect) implies an effect on the order of a 10–15 % reduction in the TFR over the past few decades. The fertility regime based on this pattern of intermediate factors has been in place for more than four decades.² There is no reason to believe that it is not sustainable in the future.³ Of course, this is not to say that it will be sustained.

²If one combines the estimated effects of the factors F_U , F_R , F_{SP} and F_T , F_I , F_C , then their cumulative effect is approximately 10 %— $TFR/DFS = .90$. This is what one observes in the NLSY-79 data. Young women intend an average of approximately 2.2 children but have only 2.0.

³An exception is F_T . Logically, the postponement of fertility cannot be maintained forever. Over the past few decades, however, ages at first and second birth have increased by only about 0.1 year, and this increase could easily be maintained for several more decades. Other parameters are often expected to change. F_U , the level of unwanted births, is often assumed to be anachronistic in a context of wide availability of effective contraceptives. This parameter is largely unchanged over

The weakness of intermediate-variable explanations is that they beg questions about the more fundamental causes of fertility: Why are fertility intentions clustered at two children per woman? Why have they remained stable? Why is unwanted fertility so high in the United States, and why has it not declined? What causes fertility postponement? Answers to these questions require consideration of more distal/fundamental causes. Asking these questions takes us to the aggregate level and focuses attention on social structure: Are there regularities at this level? Can we identify the mechanisms that produce them? In looking for explanations of aggregate differences, we are not denying micro-level variation or decision making. Rather, we view macro-level dynamics as a product of the interaction of micro- and macro-level processes (Johnson-Hanks et al. 2011). We assert, however, that major influences on aggregate fertility levels/differences should be conceptualized and operationalized at the aggregate level. Thus, emphasis moves away from individual decisions to the structures in the world that motivate and constrain behavior (Bachrach and Morgan 2013).

Relying on a Theory of Constructural Action (TCA, see Johnson-Hanks et al. 2011), we define social structures as durable forms of organization, patterns of behavior, or systems of social relations (Greenhalgh 1990; see also, e.g., McNicoll 1980). The fertility regime, its fertility level, and a set of intermediate variables make up one such social structure. Social structures are dual in nature (Sewell 1992, 2005; Johnson-Hanks et al. 2011). They emerge from the interplay of observable material structures (e.g., objects, speech, observable behaviors, and built environments) and the schematic meanings that material forms instantiate (e.g., values, beliefs, norms, scripts, and ways of categorizing). Thus, low-fertility regimes are produced by schemas that legitimate small families as “good” and fertility control as “appropriate for responsible parents,” as well as material aspects of the environment that make small families advantageous, such as the expense of childcare for working mothers and the “second shift” of housework and childcare that women often disproportionately assume (see Johnson-Hanks et al. 2011, Chapter 4). While the aggregate measurement of DFS operationalized above is the mean of individual responses, the concept we seek to measure is the DFS that is “in the world.” What family size is judged as most desirable and appropriate in a particular population?

Aggregate family-size desires are strongly correlated with observed fertility in many contexts (Bongaarts 1992; Morgan 2001). I am interested in identifying factors that can account for observed differences between the mean desired family size and observed fertility and in locating the more distal causes of these differences. For instance, in the United States there is a well-documented preference for couples to have both a son and a daughter. Couples without this balance are more likely to have an additional child (Pollard and Morgan 2002). These regularities reflect the importance of the institution of gender and the different roles expected of sons/daughters (or boys/girls). In situations where the sex of children cannot be controlled, this

the past three decades, however, indicating that it is not driven by the availability of contraception but rather by effective contraception use and the acceptability of abortion should it fail. See discussion in Technical Panel on Assumptions and Methods (2011).

preference leads some persons to revise their fertility desires upward based on their fertility history and to have more children than previously intended.⁴ More generally, all of the intermediate variables, such as the gender composition of current children, are anchored in aspects of the social structure (in its virtual/schematic and/or material components).

Social structure influences behaviors “one at a time” as persons live their lives. Situations (or conjunctures) require action, and this action may include active decision making. Variation in behavior among individuals and across groups reflects not only variation in structure (schemas and materials) but also variation in the social ecology (both experienced and observed). Different social niches (e.g., those with more or less poverty and insecurity) make some conjunctures much more likely than others. Social policy should be designed to influence actions in particular situations (or conjunctures).

U.S. Fertility Variation

How useful are these layered frameworks for understanding variation across and within populations? The more useful they are for understanding observed variation, the more confident we can be in using them to pose counterfactuals linked to policy interventions or to make predictions about the fertility regimes of the future. In other papers, we have examined cross-country variation (Morgan 2003; Morgan et al. 2009) and within-country variation elsewhere (Dharmalingam et al. 2014 on fertility variation in India). Here we examine the substantial fertility variation within the United States using the intermediate variables and TCA frameworks. Fertility regimes vary considerably across subsets of the U.S. population, and we trace this variation to their more distal determinants.

Regional Fertility Variation

U.S. regional fertility variation is substantial. Vital registration data for 2011 show TFRs for U.S. states as low as 1.6 (Massachusetts, Maine, Rhode Island, Vermont) and as high as 2.3 (Alaska, South Dakota) and 2.4 (Utah). Given an aggregate TFR of 2.0, variation on the order of 0.5–0.7 is substantial ($0.7/2.0=35\%$).

Lesthaeghe and Neidert (2006, 2009) examine this contemporary U.S. regional (state) variation and link it to voting/political partisanship. Specifically, they use state-level data (N=50) and show a correlation of 0.78 between the percent voting

⁴Pollard and Morgan (2002) argue that this preference for a balanced gender composition has declined in recent decades. A recent paper by Tian and Morgan (2014) extends the time series of estimates and provides further support for the declining significance of gender-balance preference in the United States.

for George Bush (versus Kerry) in the 2004 presidential election and the TFR for white non-Hispanics (Lesthaeghe and Neidert 2006, Figure 8). This is one of the most interesting findings about U.S. fertility in the past few decades, although we will take issue with aspects of the authors' interpretation. Specifically, Lesthaeghe and Neidert (2006, pp. 695, 696) argue that the United States provides a "textbook example" of the second demographic transition. They say it is "abundantly clear that the United States is a heterogeneous country, with even more variation within its borders than within the EU-25" (p. 671). Further, they document a clear "family/fertility regime" referred to as "the second demographic transition" (including low fertility, fertility and marriage postponement, and substantial nonmarital childbearing) that characterizes some states (and counties) and not others.

Lesthaeghe and van de Kaa, who coined and developed the concept of the second demographic transition (van de Kaa 2001), see the driving force of the transition as "postmodernist" values of self-expression, self-fulfilment, and self-actualization. The term "transition" implies that there is a secular change in the direction of these values and that demographic change reflects/responds to this change. In short, postmodernist values and a package of family/fertility behaviors are the future. In both Europe and the United States, they predict that there will be populations that are leaders and laggards. But the end result (with an undefined time line) will be the same. In terms of the structural theory we propose, these postmodernist values are incorporated into schemas (frames) that are certainly visible in contemporary society. We think that Lesthaeghe and Neidert have fallen victim to "reading history sideways" (see Thornton 2001, 2005), however, and the oft-made mistake of thinking that the most socioeconomically advanced populations reveal the future of less-developed ones.

We do not deny the visibility of postmodern values in the United States—as noted above they are components of many contemporary schemas. But a key part of our TCA theory is that schemas are "multiple" and can be used selectively in different situations. Of course, schemas are not selected randomly. A person's identity provides consistency to the schemas that he or she employs. Regional and political identities are intertwined in the United States, captured by the terminology of "Red States" and "Blue States" (signalling, respectively, a conservative versus liberal social and political orientation). Note Lesthaeghe and Neidert's attempt to project the second demographic transition onto the United States:

Yes, there is an "American exceptionalism" among a non-negligible section of the population. That section is mainly located in the Midwest, the Great Plains, and the South. It is on average much more rural than metropolitan, less well educated, adheres more to Evangelical Christianity or Mormonism.... No, there is little or no "American exceptionalism" in the remainder of the United States (Lesthaeghe and Neidert 2006, p. 694).

The characterization of the Midwest, the Great Plains, and the South in terms of lower development and less secularization makes them sound as if they are simply laggards in the long slog toward postmodernism and lowest-low fertility. But in their article's concluding paragraphs, Lesthaeghe and Neidert (2006, p. 694) give some ground and propose an "American bipolarity" (as opposed to an American exceptionalism), saying:

What makes the United States particularly interesting in the overall Western context is that the conservative and religious right is openly and vocally trying to fight back (e.g., with amendments seeking to ban same-sex marriage, closure of abortion clinics). This has not happened in Europe, Canada, or Australia.

Lesthaeghe believes that this “fighting back” is a rear-guard, last gasp. We are much less convinced of the invincibility of postmodern ideology. In our TCA frame, this fighting back reflects different schemas and identities and the structures that support them. These elements of structure have shown substantial vitality on a decadal time scale. The link that Lesthaeghe and Neidert make between U.S. politics and fertility is very interesting. But note that few persons in the U.S. see the Red/Blue divide as a thing of the past. If the partisan ideology has staying power and is linked to fertility differentials, why would one expect the fertility differentials to wane?

The Lesthaeghe and Neidert (2006, 2009) work does not provide full details of the regional regime/intermediate variables. We expect that the higher fertility in the Red (versus Blue) States is a combination of factors: higher intended fertility, higher unwanted fertility, less fertility postponement, and less “competition” (in terms of revising fertility intentions downward in the face of nonfamilial opportunities). Lesthaeghe and Neidert provide evidence of less postponement in Red (versus Blue) States but are silent on the remaining intervening variables.

Religious Fertility Variation

Hayford and Morgan (2008, Table 2) show that contemporary U.S. fertility variation is primarily traced to religiosity, not to a particular religion or denomination. A simple question asked in the 2002 National Survey of Family Growth (NSFG) captures substantial fertility variation: How important is religion in your life? Responses are very important, somewhat important, or not important. The TFRs estimated for those giving these responses (in the 5 years prior to the 2002 survey) were 2.3, 2.1, and 1.8, respectively. A similar religiosity gradient in fertility is observed in a number of European countries (see Frejka and Westoff 2008). Hayford and Morgan use the low-fertility intermediate-variable framework proposed above to examine the religiosity gradient in U.S. fertility. They find clear evidence that fertility intentions are higher for the more religious but find little difference in the other intermediate variables (including unwanted fertility and fertility postponement).⁵ To explore more distal causes, Hayford and Morgan turn to NSFG items that measure respondent’s attitudes toward various aspects of family formation and sexuality. NSFG attitude variables are included in their analyses by constructing an additive index representing traditional family ideology. They show that the higher fertility intentions of the more religious disappear if one controls for traditional family ideology.

⁵Frejka and Westoff (2008) do not explore the proximate causes of the European religious gradient.

Thus the authors identify both the key intermediate variable (higher intentions) and its origin in more distal social structure (the schemas and materials of religious and family life). As Hayford and Morgan (2008, p. 1180) say, religion, family values, and politics have been conjoined by the “culture wars” of the past few decades. This association can be seen in aggregate voting and demographic behavior and in the identity of individuals.

In sum, religiosity (measured at the individual level) shows a differential fertility pattern similar to the aggregate, state-level variation that was discussed above. To a large extent, being conservative in the contemporary United States means being religious. And being conservative and religious means supporting family values that place importance on children and parenthood. Thus individuals are “Red” or “Blue” and tend to reside in communities (and states) that include similar-minded persons. This partisan “color” is amplified and reified by material symbols in places more deeply “Red” or “Blue.”

Educational Fertility Differences

Morgan and Rackin (2010) use data from the 1979 National Longitudinal Survey of Youth (NLSY-79) that follows women (and men) throughout the childbearing years. Results discussed here compare intended parity⁶ at age 22–24 with completed parity at age 40–44 (in 2006, see Morgan and Rackin 2010, Table 4). Those with less than a high-school education at age 22–24 have a mean completed fertility (by age 40) of 2.55, compared with only 1.67 for those with a college education. Thus, there is a clear negative fertility gradient with more education at age 22–24 (i.e., more schooling associated with lower completed fertility). But this difference is not due primarily to different levels of fertility intentions at ages 22–24. Rather, the more educated “miss their fertility target” on the low side—by an average of more than one-half a birth (–.54). In contrast, the least educated exceed their fertility target slightly (by .09 births). Taking another contrast, the intended parity of high school and college graduates (at ages 22–24) is estimated to be exactly the same (2.2 children per woman). But the former have completed fertility of 2.05 compared with 1.67 for the latter.

Educational attainment can be thought of as a proxy for the types of jobs available to young women and men and the corresponding workplace environments that they will occupy during their childbearing years. These workplace demands and norms shape both fertility intentions and fertility decisions over time and thus influence whether an individual will achieve her/his fertility intentions. Postponement of fertility is a common strategy used by highly educated women to deal with long and demanding work schedules and a normative environment that does not tend to be supportive of childbearing. Once Morgan and Rackin include variables that measure postponement—childlessness and marital status, both at age 24—the effects of

⁶Intended parity is the sum of children one has and the number of additional children intended.

education are sharply attenuated. Thus much of the educational effect on under-achieving fertility intentions is explained by the continued postponement of marriage and fertility; many of these postponed births become fertility forgone.

In sharp contrast, more-educated men and men currently enrolled in school at age 24 are not more likely to under-achieve their fertility intentions compared with less-educated men. Once postponement is taken into account, highly educated men (compared with the least educated) are actually less likely to under-achieve their fertility intentions. To be specific, college-educated men are only one-half (a factor of .50) as likely to underachieve their fertility intentions compared with men with the least education. Morgan and Rackin attribute these different effects to the gender-based division of labor with respect to children. Men can combine enrolment in higher education or demanding careers with having children because they bear less of the responsibilities and time demands of childcare. Of course, the gender structures producing these differences are not immutable, and more recent cohorts may confront a situation with less different constraints for men and women.⁷

The Morgan and Rackin paper shows the importance of postponement as a strategy for dealing with the competition (F_C) that arises between valued roles and opportunities. Again a “demographic regime” anchored in distal structural determinants (conceptualized as in the TCA) provides a useful framework for explaining the educational gradient in fertility.

Race-Ethnic Fertility Differences

A common claim is that the higher fertility of U.S. racial/ethnic minorities explains the robust fertility rate of the nation as a whole. The historically higher fertility of African Americans is now a modest difference. For cohorts recently completing childbearing (using estimates from Morgan and Rackin 2010, as discussed above), white women had 1.93 children on average and African Americans had 2.18. African Americans have a much earlier pattern of childbearing and are both more likely to have fewer and more children than intended (versus the exact number) compared with whites. Using 2011 vital registration period estimates (see Martin et al. 2013b), the rates for all whites and African Americans are 1.91 and 1.92, respectively. If we focus on non-Hispanic whites and African Americans, the TFRs are 1.77 and 1.92. This difference of 8 % ($1.77/1.92 = 1.08$) could be largely accounted for by differing levels of unwanted fertility (F_U).⁸

⁷Alternatively, the experience of the cohorts in the NLSY 1979 (the birth cohorts born in the 1955–1964 decade) may have become calcified, a stalled gender revolution (England 2010).

⁸Mosher et al. (2012, Table 1) show the percentage of unwanted births among non-Hispanic whites and African Americans as 6.4 % and 11.7 %, respectively, a difference of 5.3 %. African American fertility is 8 % higher than that of whites. Thus, unwanted fertility can account for 66 % of the higher African American TFR.

The Hispanic TFR was estimated at 2.24 in 2011, but was as high as 2.86 in 2006.⁹ The Mexican-origin population's TFR was 2.14 in 2011, but was as high as 3.00 in 2006. Both these higher rates and their dramatic decline can be explained by immigration and the timing of fertility vis-à-vis migration (see Parrado 2011; Parrado and Morgan 2008). Immigrants tend to be young adults; they partner and have children soon after arrival in the United States. This makes their fertility appear to be quite high when measured on a period basis. The lifetime fertility of most immigrant groups is unlikely to be much above replacement, however. The recent dramatic decline in Hispanic (and especially Mexican) fertility is due to the sharp decline in immigration resulting from the Great Recession. This decline in immigration dramatically and swiftly changed the proportion of recent migrants in the United States (i.e., those in the United States 0–5 years who have much higher fertility than longer-term residents).

Vital registration data (see Martin et al. 2013a) show that the Asian and Pacific Islander population had a 2012 TFR of 1.8 (little different from the 2012 estimate for whites and African Americans at 1.9). Some Asian American groups (Japanese and Chinese, for instance) have fertility that is substantially below replacement levels. Using data from the American Community Survey, Yong Cai estimates that ethnic Chinese and Japanese TFRs in the 2008–12 period were 1.5 and 1.6, respectively.¹⁰ There is little work on ethnic Asian fertility in the United States, but these low levels resemble patterns in China and Japan. Preference for sons may place some upward pressure on Chinese fertility (F_{SP}), but the counterforces are obviously strong. We suspect that levels of fertility postponement (F_T) are dramatic and that some postponed births are foregone to invest in existing children (F_C). Levels of unwanted fertility (F_U) are very low. These proximate variables, in turn, are anchored in a greater “rationality,” or degree of planning (compared with U.S. whites), characterizing a highly rational cultural logic that determines family size in these populations (for Chinese diaspora populations see Greenhalgh 1988). This cultural logic includes less stigma toward abortion.

Discussion

When we introduced the (low-fertility) intermediate-variable framework above, we identified the parameters (the fertility regime) that lead to replacement-level fertility in the United States. In our discussion of fertility differentials, we identified the most likely intermediate variables responsible for variation. Table 7.1 summarizes our claims about variation. For instance, variation by state is caused by different levels of desired fertility (DFS) that are altered by differential levels of unwanted fertility (F_U) and postponement/competition (F_T and F_C). In contrast,

⁹To illustrate the diversity within the Hispanic population, Cuban Hispanics' 2011 TFR was only 1.43, while that for “other Hispanics” was 2.87.

¹⁰Personal correspondence, 13 Jan 2014.

Table 7.1 Intermediate variables responsible for fertility variation in the United States

Variation by:	Desired family size (DFS)	Level of unwanted fertility (F_U)	Effect of sex preference (F_{SP})	Effect of fertility postponement (F_T)	Effect of competition with other desires/intentions (F_C) ^a
State	X	X		X	X
Religiosity	X				
Education				X	X
Race/ethnicity					
Black/white		X			
Hispanic/non-hispanic				X	
Asian/white		X	X	X	X

^aEffect of competition with other desires/intentions that reduces fertility intentions over the life course

education differentials can be accounted for by variation in postponement/competition (F_T and F_C) alone.

Identifying the demographic regime and its variations is only the first step. Documenting the difference in, for instance, unwanted fertility begs the question of why these levels of unwanted fertility vary. Answering this question requires attention to fundamental/distal causes embedded in social structure. In our (TCA) conceptualization of social structure, we look to key conjunctures, the situations where actions occur. What are the materials available to realize action or to suggest it? What is the nature of the available schemas? We will provide two examples of the kind of analysis we propose.

Unplanned Pregnancies

The first conjuncture is an unplanned pregnancy. Unplanned pregnancy is common in the United States. Roughly 50 % of pregnancies are unintended, as are 37 % of all births (Mosher et al. 2012). Ten to fifteen percent of all births are unwanted births (F_U), with little evidence of secular change in the past few decades (Mosher et al. 2012).

Unintended pregnancy is a classic conjuncture: It is a situation that must be resolved. The schemas for construing the situation are well known by all in the United States and are highly politicized—they are “in the world.” There is a pro-choice schema that stresses the importance of planned pregnancies. One should be ready, economically and emotionally, to have children. This schema accepts postponement of childbearing as a way to meet these goals. This pro-choice schema legitimates the option of ending an unplanned pregnancy. An opposing anti-abortion schema views life as beginning at conception and views abortion as morally problematic. Further, this schema valorizes the choices of those who “do the right thing”

and have the child. This schema holds that such choices produce maturity and that being a parent provides stability and order to otherwise chaotic lives.

How one construes a woman's situation (the schema she uses to motivate/justify her decision) may be contested. It is influenced by significant others (including parents, friends, and romantic partners) and by the availability of materials (including abortion services and information) that make enacting one decision easier/more difficult than another. Edin and Kefalas (2005) describe U.S. women living in poverty for whom many of the role models embody the anti-abortion schema. Many of the stories told in these environments suggest that having children early (even if unintended) does not ruin lives; rather, these children bring order, meaning, and stability. Mothers, even the economically disadvantaged, can provide children what they most need—love and support. Such mothers say that they make “promises I can keep” to “be there” for their children. This pro-life schema is not embraced only by the poor. The Republican Vice-Presidential candidate in 2008, Sarah Palin's daughter's much-discussed pregnancy and her decision to have the child received widespread media attention in 2007. Conservative political views and many religious leaders valorized her and her family's choice (see Morgan 2011, pp. 61–63).

Of course, there are many abortions in the United States as well. Edin and Kefalas's sample consists of young mothers living in poverty. Abortion is common even within these communities, and presumably those choosing not to have children at young ages would justify their decision using the opposing schema. In other communities—among the wealthier and better-educated segments of the population—early and unintended childbearing is less common. In these settings, abortions are justified in terms of allowing persons to fulfill their goals and dreams and/or to advantage existing children or potential future ones.

The contrasting responses to unwanted pregnancy in the United States explain the high level of unplanned/unwanted births. Variation in the construal of this conjuncture across physical and social space explains variation in this intermediate variable across these same dimensions. Contrasts with East Asia seem noteworthy. The anti-abortion schemas are not legitimated there, and the dominant concern is with not diluting the resources that would allow existing children to thrive. This conjuncture would be consistently construed in favor of abortion in East Asia. Unwanted fertility is rare in East Asia compared with the United States – so rare that measurement of the phenomena is frequently not even attempted.

Second Births

Since births are inherently sequential, persons can make decisions to have or not have an additional birth.¹¹ A second key conjuncture is the decision/intent to have a second birth. The schemas that are “in the world” and thus accessible to women are many. Having a second child is often justified/rationalized as providing a sibling for

¹¹The obvious exception is the relatively rare case of multiple births.

the first born. Having a sibling is argued to be advantageous in terms of the first child's development and providing an important relative throughout life. Some parents are also concerned that having a single child puts them at risk of having no children given the small chance that something happens to the first born. Finally, with one child already born, the "marginal cost" of a second is reduced in several ways: Some toys/clothes are already purchased; the parents already have experience with children, etc. Alternative schemas in the United States (reasons to stop at one child) are less visible than in East Asia. Having a difficult or disabled child is a possible reason and implies that the investment in the first child (because of the unusual circumstances) limits the couples' ability to invest in a second. Other reasons include union dissolution, again a factor that limits resources (such that a second child would threaten the ability to care for the first).

The progression to second birth is high in the United States across time and social space; one-child families are relatively rare. Again the contrast with East Asia is informative. There, concerns about the cost of education and the competitive nature of admission to the best schools legitimate rationales that postpone or forego the second child in order to advantage the first born. In the East Asian context, good parents are expected to provide "intensive parenting," including cram courses after school in English and math. These courses matter for admission to the best schools and colleges. In turn, graduation from the best colleges provides the greatest access to the most secure and best-paying jobs. Tan et al. (2014) describe this intense competition as a dysfunctional "arms race" that encourages ever greater investments in existing children.

U.S. Policies

As noted at the outset, U.S. fertility has approximated the replacement level for four decades. The U.S. government sees the current fertility rate as adequate and has no policies aimed at changing the aggregate rate (United Nations 2011). Policymakers are concerned about the high level of adolescent childbearing, however, and about the large proportion of births that are unintended or unwanted (compared with the situation in many other highly developed countries). Healthy People 2020¹² set a goal of increasing the use of highly effective contraceptives, and the United States has policies aimed at reducing unintended and unwanted childbearing, especially among the young and the unmarried where unintended childbearing is greatest. Federally supported abstinence-only education programs have grown rapidly since 2008. The recent decline in U.S. adolescent pregnancy rates follows the patterns observed in other developed countries, however—improved contraceptive use, not increasing abstinence, has been the primary determinant of declining rates (Santelli et al. 2007). Much evidence indicates that government funding for family planning

¹² See <http://www.healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=13>

services reduces unintended pregnancies among the poor and near poor (Cleland et al. 2011).

There is also a large set of policies that likely have inadvertent effects on fertility. Some of these policies are aimed at poor children and families. Moffitt (2014) argues that changes in these policies in the past two decades have favored the working poor and near poor,¹³ as opposed to those most disadvantaged. These families, as the result of having some earned income, likely get the full benefit of programs such as the annual child tax credit (at \$1,000 per child) and a substantial credit through the Earned Income Tax Credit (EITC, a maximum annual tax credit of \$3,305 or \$5,460 for one or two qualifying children, respectively). Married couples (with two children) making over \$50,000 do not qualify for any payments from the large EITC program,¹⁴ and the \$1,000 child tax credit is phased out as income for a married couple moves above \$100,000.¹⁵ These policies are aimed at poverty reduction and assisting the middle class, but there is evidence that they have some pronatalist impact (Whittington 1992).

Other policies are no doubt relevant, although their connection to fertility is less direct. For instance, monetary policies aimed at making homes more affordable through government-backed mortgages may contribute to family formation at earlier ages. On the other hand, macro-economic policies that lead to a globalized work force and globalized production reduce job and income security for much of the U.S. working and middle class. This insecurity likely postpones family formation.

In short, the tapestry of public policy likely has pervasive inadvertent effects on U.S. family formation. Unraveling these effects is a very difficult task. The more valuable lessons from policy interventions are more likely to come from intentional interventions in low-fertility countries (see McDonald 2006).

Conclusion

According to Lesthaeghe and Neidert (2006), the United States has more internal fertility variation than the EU-25. We have examined this variation and identified important intermediate variables that are responsible. These intermediate variables are anchored in a social structure that makes them sustainable. Thus, very low fertility is a possibility in the United States, but the more likely scenario is fertility slightly to modestly below replacement level. The U.S. case does not provide strong or clear lessons for those with much lower fertility. The fertility regime in the United

¹³The U.S. poverty line in 2014 is an annual income of \$24,000 for a family of four. The working poor and near poor would consist of families that earn approximately \$10,000 to \$45,000 a year for a family of four.

¹⁴For limits to the EITC in 2014, see: <http://www.irs.gov/Individuals/Preview-of-2012-EITC-Income-Limits,-Maximum-CreditDOUBLEHYPHENAmounts-and-Tax-Law-Updates>

¹⁵For limits to the child tax credit in 2014 see: <http://www.irs.gov/uac/Ten-Facts-about-the-Child-Tax-Credit>

States does produce replacement-level fertility, but the intermediate variables involved are not sustained by explicit policy. Rather they are sustained by historical and cultural continuity. We do argue, however, that the approach to explaining fertility levels and variation in the United States is transportable. That is, a first step is to identify the “fertility regime”: What is it that needs to be explained? Which intermediate variables account for low fertility? The second step is to locate the origins of these intermediate variables in social structure and examine the conjunctures in which this structure is reproduced. The conjunctures described above, focusing on abortion and having a second child, provide examples.

Understanding the social structures that determine the intermediate variables (that, in turn, determine the level of fertility) requires imagining the conjunctures that individuals face. This includes consideration of the materials that suggest or enable courses of action and the “local logics” (the schemas available to actors). Effective policy must be designed to alter the way conjunctures are construed. Social scientists often see policy as altering the materials present in a conjuncture. But altering the ways people think about their options is also a plausible strategy. Considering policies that provide innovative ways of thinking about a situation (conjuncture) and providing resources that enable new choices can lead to new social structures, including those that produce replacement-level fertility.

References

- Bachrach, C. A., & Morgan, S. P. (2013). A cognitive–social model of fertility intentions. *Population and Development Review*, *39*, 459–485.
- Bongaarts, J. (1978). A framework for analyzing the proximate determinants of fertility. *Population and Development Review*, *4*, 105–132.
- Bongaarts, J. (1992). Do reproductive intentions matter? *International Family Planning Perspectives*, *18*(3), 102–108.
- Bongaarts, J. (2001). Fertility and reproductive preferences in post-transitional societies. *Population and Development Review*, *27*(Supplement: Global Fertility Transition), 260–81.
- Bongaarts, J., & Feeney, G. (1998). On the quantum and tempo of fertility. *Population and Development Review*, *24*(2), 271–291.
- Bongaarts, J., & Potter, R. G. (1983). *Fertility, biology and behavior*. New York: Academic.
- Cleland, K., Peipert, J. F., Westhoff, C., Spear, S., & Trussell, J. (2011). Family planning as a cost-saving preventive health service. *New England Journal of Medicine*, *364*(18), e37.
- Davis, K., & Blake, J. (1956). Social structure and fertility: An analytical framework. *Economic Development and Cultural Change*, *4*, 211–235.
- Dharamalingam, A., Rajan, S., & Morgan, S. P. (2014). The determinants of low fertility in India. *Demography*, *51*(4), 1451–1475.
- Edin, K., & Kefalas, M. (2005). *Promises I can keep: Why poor women put motherhood before marriage*. Berkeley: University of California Press.
- England, P. (2010). The gender revolution: Uneven and stalled. *Gender and Society*, *24*(2), 149–166.
- Frejka, T., & Westoff, C. F. (2008). Religion, religiousness, and fertility in the US and in Europe/ Religion, religiosité et fécondité aux Etats-Unis et en Europe. *European Journal of Population*, *24*(1), 5–31.

- Greenhalgh, S. (1988). Fertility as mobility: Sinic transitions. *Population and Development Review*, 14(4), 629–674.
- Greenhalgh, S. (1990). Toward a political economy of fertility: Anthropological contributions. *Population and Development Review*, 16(1), 85–106.
- Hagewen, K. J., & Morgan, S. P. (2005). Intended and ideal family size in the United States, 1970–2002. *Population and Development Review*, 31(3), 507–522.
- Hayford, S., & Morgan, S. P. (2008). Religiosity and fertility in the United States: The role of fertility intentions. *Social Forces*, 86(3), 1163–1188.
- Johnson-Hanks, J., Bachrach, C., Morgan, S. P., & Kohler, H.-P. (2011). *Understanding family change and variation: Structure, conjuncture, and action*. New York: Springer.
- Lesthaeghe, R., & Neidert, L. (2006). The second demographic transition in the United States: Exception or textbook example? *Population and Development Review*, 32, 660–698.
- Lesthaeghe, R., & Neidert, L. (2009). U.S. presidential elections and the spatial pattern of the American second demographic transition. *Population and Development Review*, 35(2), 391–400.
- Martin, J. A., Hamilton, B. E., Osterman, M. J. K., & Mathews, T. J. (2013a). Births: Final data for 2012. *National Vital Statistics Reports*, 62(9).
- Martin, J. A., Hamilton, B. E., Ventura, S. J., Osterman, M. J. K., & Mathews, T. J. (2013b). Births: Final data for 2011. *National Vital Statistics Reports*, 62(1).
- McDonald, P. (2006). Low fertility and the state: The efficacy of policy. *Population and Development Review*, 32(3), 485–510.
- McNicoll, G. (1980). Institutional determinants of fertility change. *Population and Development Review*, 6(3), 441–462.
- Moffitt, R. (2014, 1–3 May). *The deserving poor, the family, and the U.S. welfare system*. Presidential address at the annual meeting of the Population Association of America, Boston.
- Morgan, S. P. (2001). Should fertility intentions inform fertility forecasts? In *Proceedings of U.S. Census Bureau Conference: The direction of fertility in the United States*. Washington, DC: U.S. Census Bureau.
- Morgan, S. P. (2003). Is low fertility a twenty-first-century demographic crisis? *Demography*, 40(4), 589–603.
- Morgan, S. P. (2011). Thinking about demographic family differences. In M. J. Carlson & P. England (Eds.), *Social class and changing families in an unequal America* (pp. 50–67). Palo Alto: Stanford University Press.
- Morgan, S. P., & Hagewen, K. (2005). Is very low fertility inevitable in America? Insights and forecasts from an integrative model of fertility. In A. Booth & A. C. Crouter (Eds.), *The new population problem: Why families in developed countries are shrinking and what it means* (pp. 3–28). Malwah: Lawrence Erlbaum Associates.
- Morgan, S. P., & Rackin, H. (2010). The correspondence of fertility intentions and behavior in the U.S. *Population and Development Review*, 36(1), 91–118.
- Morgan, S. P., & Taylor, M. G. (2006). Low fertility at the turn of the twenty-first century. *Annual Review of Sociology*, 32, 375–400.
- Morgan, S. P., Guo, Z., & Hayford, S. (2009). China's below replacement fertility: Recent trends and future prospects. *Population and Development Review*, 35(3), 605–630.
- Mosher, W. D., Jones, J., & Abama, J. C. (2012). Intended and unintended births in the United States: 1982–2010. In: *National health statistics reports* (Vol. 55, pp. 1–27). Hyattsville: National Center for Health Statistics.
- Parrado, E. A. (2011). How high is Hispanic/Mexican fertility in the United States? Immigration and tempo considerations. *Demography*, 48, 1059–1080.
- Parrado, E., & Morgan, S. P. (2008). Intergenerational fertility among Hispanic women: New evidence of immigrant assimilation. *Demography*, 45(4), 651–671.
- Pollard, M. S., & Morgan, S. P. (2002). Emerging gender indifference: Sex composition of children and the third birth. *American Sociological Review*, 67, 600–613.
- Santelli, J. S., Lindberg, L. D., Finer, L. B., & Singh, S. (2007). Explaining recent declines in adolescent pregnancy in the United States: The contribution of abstinence and improved contraceptive use. *American Journal of Public Health*, 97(1), 150–156.

- Sewell, W. H. (1992). A theory of structure: Duality, agency, and transformation. *American Journal of Sociology*, 98(1), 1–29.
- Sewell, W. H. (2005). *Logics of history*. Chicago: University of Chicago Press.
- Tan, P. L., Morgan, S. P., & Zagheni, E. (2014). *A case for “reverse one-child” policies in East Asia? Examining the link between education costs and lowest-low fertility*. Unpublished manuscript. Durham: Duke University.
- Technical Panel on Assumptions and Methods. (2011). *2011 technical panel on assumptions and methods: Report to the social security advisory board*. Washington, DC: Social Security Advisory Board.
- Thornton, A. (2001). The developmental paradigm, reading history sideways, and family change. *Demography*, 38(4), 449–467.
- Thornton, A. (2005). *Reading history sideways: The fallacy and enduring impact of the developmental paradigm on family life*. Chicago: University of Chicago Press.
- Tian, F. F., & Morgan, S. P. (2014, May 1–3). *Sex composition of children and third birth in the United States: Further evidence for emerging gender indifference*. Paper presented at the annual meeting of the Population Association of America, Boston.
- United Nations. (2011). *World fertility policies wallchart 2011*. <http://www.un.org/en/development/desa/population/publications/fertility/world-fertility-policies-2011.shtml>. Accessed 14 Oct 2014.
- van de Kaa, D. J. (2001). Postmodern fertility preferences: From changing value orientation to new behavior. *Population and Development Review*, 27(Supplement: Global Fertility Transition), 290–331.
- Whittington, L. A. (1992). Taxes and the family: The impact of the tax exemption for dependents on marital fertility. *Demography*, 29(2), 215–226.