Social Context and Fertility-Related Attitudes:
A Pilot Study Using Ecological Momentary Assessment

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Short Abstract: To better understand variation in attitudes toward fertility and family, we conduct a pilot study using a mobile phone application designed to measure variation in attitudes over time and by physical location. As people move through various physical and social environments as part of their everyday lives (e.g., school, work, home), they are exposed to various cues, or primes, that may prompt them to make different associations that can affect their attitudes on topics relevant to fertility, such as education and romantic relationships. We test the extent and nature of this variation in attitudes in a pilot study of 25 respondents. Respondents use a mobile phone application that sends them short surveys about their attitudes and social interactions 3 to 5 times a day for two weeks.

Measuring Cognition and Culture in Demographic Research

Recently, some demographers have argued that bringing new perspectives on cognition and culture to demographic research can yield insights into fertility attitudes and behavior (Bachrach 2014; Bachrach and Morgan 2013; Thornton et al. 2012; Johnson-Hanks et al. 2011). This study develops measures that will allow us to test two propositions drawn from the new demographic literature on culture and cognition: (1) Individuals hold multiple, sometimes competing, mental models (sometimes called schemas) related to childbearing and family formation. (2) Use of a certain mental model in a given situation, rather than other available models, is conditioned by physical and social contexts. To develop methods to address these questions, we focus on different domains that may be either complementary or competing in young people's lives: school, relationships, and family of origin.

We use recently developed methods for repeated measurement of attitudes across physical and social environments to examine the extent and nature of variation in attitudes toward family, relationships, and school. We measure attitudes using both conventional survey items (explicit measures of attitudes) and the Implicit Associations Test (IAT)—a method for implicit measurement of attitudes, developed by cognitive psychologists to measure cognitive associations that may not reach conscious awareness (Greenwald, McGhee, and Schwartz 1998). Using a recently developed mobile phone application, or app (Krivo et al. 2017), we will measure respondent attitudes over the course of two weeks, administering 3 to 5 short surveys triggered by physical location on each day of the study. Our short survey asks a sample of college students to report how attached they feel to their studies and campus, to their relationship and partner if they have one, and to their parents and home environment. They are then asked a short series of questions about their recent social interactions with fellow students, relationship

partners, and family members. Together with data on physical location collected by the app, these measures will allow us to examine how attitudes vary with changes in physical location and recent social interactions.

Activation of Cognitive Associations and Environment

Our study builds on findings from cognitive psychology about how information is stored and accessed by individuals. Individuals cognitively encode a vast set of associations between concepts. Culture at the individual level is not encoded as static representations, but instead is a set of associations that that can be *activated by context*. Priming is a method for eliciting cognitive associations by making particular concepts salient and observing how cognitive associations are activated. Importantly, studies have found that real-life physical contexts can have effects on behavior that are likely due to priming. For example, one study found that voting in a school rather than another location type was associated with greater support for a school funding initiative; follow-up experiments found that priming was a likely cause (Berger et al. 2008). Our study will build on this literature by testing to what extent real-life physical environments (location) and social environments (recent social interactions) are associated with variation in attitudes related to those environments. This will allow us to develop future studies of how real-life environments prime associations between fertility-related domains.

Complementary or Competing Domains: School, Relationships, and Family

To better understand fertility attitudes and behavior, it is important to consider domains of life that potentially could complement or compete with fertility desires (Barber 2001). For our target population of college students, we expect that decisions about how many children to have and at what age to have them may seem far in the future for many of them. Therefore, our survey

questions focus on spheres that have more immediate relevance in their lives, but also have long-term relevance for fertility behavior.

First, attachment to college—including feelings of belonging on campus and identity as a student—is related to degree completion, a behavior correlated with timing and level of fertility. On average, women with more education have fewer children (CPS 2010) and give birth later (Rindfuss, Morgan, and Offutt 1996) than do women with less education. Second, romantic relationships may either contribute to or detract from attachment to college, and also directly affect fertility behavior, including having sex and using contraception. Similarly, a student's relationship with their family of origin may either support their attachment to college or compete with their attention to their studies. Our study will test measures that can adjudicate whether physical and social environments that prime each of these three spheres are associated with variation in attitudes toward these same three spheres.

Research Design

We will recruit 25 respondents in a convenience sample of students with Android phones at a liberal arts college in the Mid-Atlantic region. In an intake appointment, each respondent will download the app to their phone and practice using the app and completing a practice IAT module. Respondents will receive requests to complete surveys every day of the two-week study period, and will receive between 3 and 5 requests each day. The app will identify when the respondent is in their living space or family home (identified during the intake appointment), and will send a survey module when a respondent has been at these locations for 60 minutes. Respondents will receive compensation, as well as bonuses for completing all survey requests.

One goal of this pilot study is to test feasibility and compliance with this study design. A second goal is to measure the extent of variation in these explicit and implicit measures. A third

goal is to test whether variation is associated with different physical and social environments.

Data collection will be conducted in November, 2018.

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