Title
Bearing Culture: Resources, Networks and the Transition to New Motherhood

Author
Garrett, Sarah Bracey

Publication Date
2013

Peer reviewed|Thesis/dissertation

Bearing Culture: Resources, Networks and the Transition to New Motherhood

By

Sarah Bracey Garrett

A dissertation submitted in partial satisfaction of the

requirements for the degree of

Doctor of Philosophy

in

Sociology

in the

Graduate Division

of the

University of California, Berkeley

Committee in charge:

Professor Ann Swidler, Chair
Professor Arlie Hochschild
Professor Robert Willer
Professor Dacher Keltner

Fall 2013

Abstract

Bearing Culture: Resources, Networks and the Transition to New Motherhood

by

Sarah Bracey Garrett

Doctor of Philosophy in Sociology

University of California, Berkeley

Professor Ann Swidler, Chair

This dissertation is about women and their cultural resources as they progress through pregnancy, birth, and early parenthood. Specifically, it focuses on a key interpretive resource: the "cultural frames" (Goffman 1974) women encounter that are relevant to the settings, practices and outcomes they face during this important social moment (e.g., labor and delivery as a high- or low-risk environment, breast-feeding as compulsory or optional).

Pregnant women's perspectives, and individual-level cultural resources more generally, are under-researched in the social sciences. Few scholars study how pregnant women in the U.S. perceive self-, birth- or infant-care practices during this key life stage. Those that do typically focus on narrow topics and/or narrow segments of the population. And, significantly, a great deal of research in this and other health-related subfields assumes that individuals' views track with—and are sufficiently measured by—characteristics such as race/ethnicity, immigrant status, and nationality. At the same time, research on individual-level cultural resources has been stalled by the difficulty of operationalizing them. Cultural repertoire theory, for example, is conceptually useful and widely used (Swidler 1986, 2001; Lamont 1992), but it has been the subject of very little direct empirical study.

For this dissertation I designed a survey instrument that could (a) capture multi-dimensional data on pregnant women's perspectives, and (b) operationalize the cultural resources—here cultural frames—in individuals' repertoires. The module appeared in a series of longitudinal surveys and interviews of a socio-economically- and racially-diverse group of pregnant women in Northern California. I use the survey data to answer the following three questions.

Chapter 1: What is the cultural landscape of pregnancy for contemporary women, and in what regards does it vary by social location? Focusing primarily on the cultural frames that these women encounter about peri-natal practices and settings, I find (a) that more and less privileged women have divergent—but not radically different—landscapes, and (b) that exposure to contradictory frames is universal, though greater among highly-educated women. I also find a complex relationship between individuals' *exposure to* and *endorsement of* specific cultural frames. Investigating these "cultural landscapes" contributes novel data to the study of pregnancy and birth in the contemporary U.S., and enriches the study of culture in health research.

For Chapters 2 and 3, I conceptualized familiarity with diverse frames about a topic as having multiple cultural "tools" in one's repertoire, and calculated a cultural repertoire diversity score (CRD) based on this. Repertoire theory posits that culture affects individuals by giving them tools, such as cultural frames and styles of self-presentation, with which they interpret, navigate, and act in and on social life (Swidler 1986).

Chapter 2: What individual-level characteristics predict more or less diverse cultural repertoires? I use CRD score as a dependent variable to investigate whether more privileged respondents "consume" a wider variety of cultural frames than do less privileged individuals; and whether this consumption is related to respondents' social network characteristics. I find that educational achievement and social network diversity independently predict repertoire diversity. These analyses reveal a new way in which human and social capital confer cultural resources.

Chapter 3: Does having a more diverse cultural toolkit lead to greater individual well-being, as cultural repertoire theory would predict? Employing longitudinal data and CRD score as an independent variable, I find that women with more diverse cultural repertoires in fact experience worse postpartum socio-emotional outcomes than do their counterparts, net of relevant covariates. Drawing on social psychology, I posit that diverse cultural resources in this context may function less as tools individuals use to "solve" problems, and more as reference points against which to compare their experiences. This paper overcomes a long-standing barrier to understanding how culture impacts social life and identifies a previously unrecognized socio-cultural influence on postpartum mental health.

By operationalizing and directly measuring individual-level cultural resources, and by doing so in a more diverse sample of women then is typically studied in research on women's reproductive lives, this dissertation contributes new information to cultural sociology, to the study of culture in health contexts, and to research on contemporary pregnancy, birth and new motherhood.

For my parents, Pam and Dan Garrett, with great love and gratitude.

CONTENTS

ACKNOWLEDGMENTS

There are many people I wish to thank for having made this dissertation, and my completion of grad school, possible.

First, I am grateful to the over 300 pregnant women in the California Bay Area who voluntarily agreed to participate in this research project. They gave generously of both time and energy at a time when they had little to spare. I hope to honor them by producing research that can improve maternal care and outcomes for women like them.

This project owes a great deal to Professor Aaron Caughey, M.D./Ph.D., who in 2009 was a researcher-clinician at U.C. San Francisco. I had spent almost a year trying to gain research access to local prenatal care clinics, with no luck. After much networking, I managed to cross paths with Dr. Caughey, who invited me to collaborate with his warm and capable research team. It was only through this collaboration that I was able to recruit patients from so many different institutions, and, specifically, to collect data from low-income respondents, whose voices are largely missing from research on women's experiences of pregnancy, birth and early parenting.

Instrumental to the task of data recruitment was my wonderful team of undergraduate apprentices from U.C. Berkeley. Kirsten Anderson, Melissa Cervantes, Janet Hurtado, Aly Kronick, Jackline Lasola, Stacy Songco, and Christina Vargas were dedicated, resourceful, and professional. They collected a great deal of the survey data, including all of the data from our Spanish-speaking respondents. After data collection was done, Keli Benko and Kelly Stoering came on board to help organize and code the copious interview data. I am grateful for the capable work, intellectual curiosity, and great enthusiasm that these nine apprentices brought to the project. It was truly a joy to work with them.

I feel fortunate to have received such insightful and enjoyable faculty support during my time at U.C. Berkeley. I thank my chair, Ann Swidler, for her tireless enthusiasm about this project. Her faith that it was interesting and important buoyed me many more times than she knows. I am grateful to have had the chance to have worked so closely with Arlie Hochschild, who served on my committee and for whom I also worked as a research assistant for many years. I am inspired by her guidance to think creatively, write vividly, and listen empathically to the stories that respondents tell me. I am grateful to Robb Willer, whose clever ideas, high standards, and eye for research design meaningfully improved this study. His support and professional advice have also helped me to navigate scholarly life. I thank Dacher Keltner, who served as the outside member on my committee and who models an especially engaging and publicly accessible form of scholarship. Finally, I wish to thank Jon Stiles, Assistant Director for the UC DATA Archive, for being so generous with his time and expertise. Jon spent many hours, at many different stages of this project, helping me to transform over a dozen different survey data sources and formats into one usable data-set.

I am grateful for the wonderful colleagues that I met at Berkeley who have offered clever solutions to research problems, participated in collaborative writing groups, reminded me to take care of myself, and pushed me to have confidence in my work. In alphabetical order, Corey Abramson, Rachel Best, Sarah Cowan, Irenka Dominguez-Pareto, Ryan Calder, Daniel Laurison,

Alex Janus, Laura Mangels, Damon Mayrl, Patricia Munro, Jennifer Randles, Eréndira Rueda, Heidy Sarabia, Stephen Smith, and Nick Wilson.

I am so thankful for the loving, fun, and endlessly supportive group of friends and family that has enriched my life both in and outside of graduate school. These include Anne, Debbie, Eren, Lisa, Liz, Matt, Ryan, Stephen, Tracie, and my in-laws, Joel and Janet, who have been so generous with the care that they have given my son over the last busy year

I also thank my parents, to whom I am endlessly grateful. Their intellectual curiosity and social ease primed me to find social life interesting from very early on. I credit them with my sociological imagination. This dissertation is dedicated to them.

And, finally, to Jesse, the most wonderful partner, husband, co-parent and best friend I could have hoped for: Thank you for your boundless love and support. You have helped me to be a better and happier scholar, partner, and parent than I could have ever been on my own.

INTRODUCTION

This dissertation is about women and their cultural resources as they progress through pregnancy, birth and early parenthood. It is based primarily on original longitudinal quantitative data collected from women receiving prenatal care at public hospitals, private institutions, and at home in preparation for home-birth in the San Francisco Bay Area. Across three papers, presented below, I investigate how these women perceived practices and outcomes relevant to pregnancy, birth and parenting during this time; how these perceptions were distributed across select social groups; and how these perceptions shaped women's emotional and mental wellbeing.

Theoretical Framing

I follow Goffman's (1974) use of "cultural frames" as a "basic element" of daily life that allows individuals to comprehend the meaning of a given scene or interaction (pp. 10-11, 21, 26). Such interpretive frames simultaneously inform individuals and involve them in the scene, and individuals act based on these perceptions (p. 345). This conceptualization asserts that social interactions, practices, or settings do not have an inherent character; instead, their meaning—their characterization as safe or risky, virtuous or depraved, special or mundane—varies with the frame(s) applied to them.[1] This insight is more or less evident when considering popular evaluations or "framings" of various parenting practices over the decades: for example, breastfeeding as base versus enlightened; or the use of pain medication during labor as a practice that liberates women versus it being a practice that subjugates them to intensified medical control (Blum 1999; Leavitt 1986; Simonds, Rothman and Norman 2007).

Such frames are a kind of cultural resource that, along with others, comprise individuals' "cultural toolkits" or repertoires (Lamont 1992; Lamont and Thévenot 2000; Swidler 1986; Swidler 2001). Cultural repertoire theory posits that culture affects individual action by providing individuals with the "tools" and "cultured capacities" with which they act (e.g., skills, styles of self-presentation, ways of understanding the world). Individuals selectively appropriate these cultural resources and transpose them from one context to another (Sewell 1992; Sewell 1996; Swidler 2001). People deploy these in more or less regular lines of action in order to navigate new situations and resolve problems.[2] The repertoire model posits that individuals typically possess multiple cultural resources, which helps them to navigate diverse and unpredictable challenges: "People are better equipped for life if they have available multiple approaches to situations, if they can shift justifications for their actions, and if they can mobilize different meanings to organize different lines of action" (Swidler 2001, pp. 182-3).

Taking an example from my fieldwork, I observed women interpret emergency Cesarean sections with a variety of frames: as a life-saving miracle, as a routine medical procedure, as a sign that a woman had "failed" at the first task of motherhood, and as an expression of Western medicine's authority over female bodies, to name a few. Most individuals used only one frame in characterizing the procedure, but others referenced multiple frames. These women held "in

[1] "...Because of the very nature of framing, events have an essentially loose character, subject to doubt, a looseness that effects both the actor and his claims and the witness and his" (Goffman 1974, p. 324).

[2] This focus on skills and resources challenges the perspective that culture affects individual action by instilling constraining values or motivations (Parsons 1951; Weber 1958).

reserve" multiple understandings of the event (Swidler 2001, p. 33). If these women or someone they knew experienced an emergency C-section, they could theoretically deploy one frame over another to, for example, legitimate the outcome or characterize it a certain way to a certain audience.[3]

Repertoire theory is intuitive and conceptually fruitful, ultimately used widely across the social sciences. Yet no studies have set out to systematically measure individual cultural repertoires themselves, nor test the theory's basic premises. Cultural sociology knows little about the sources of individuals' repertoire diversity or its consequences for individuals. (See as exceptions Fosse 2010; Harding 2007; Harding 2010).

These problems result from the conceptual and practical barriers to operationalizing the cultural repertoire. Surveys have not collected information on the diversity of frames available to individuals (Harding 2007, p. 352). And measuring other components of the repertoire—"styles, skills and habits," for example—would likely require considerable ethnographic work and would be difficult to standardize across social settings. The lack of such measures has inhibited the development of repertoire theory and the scholarly understanding of cultural resources in individual lives, more broadly.

Empirical Setting

In United States, pregnancy and birth are experienced by the vast majority of women and their families. Many women describe these events as a key turning point in their lives—as a period in which they establish a different sense of themselves and their intimates, and different relationships to the medical establishment (Glenn, Chang and Forcey 1994; Hartrick 1996; Lee 1997; Miller 2005; Miller 2007; Nelson 2009; Oakley 1979; Shelton and Johnson 2006). During this period, new information, advice, identities and concerns enter, solicited or not, into women's lives. Because of the availability of Internet-based health information and online communities of mothers, and the pace with which the practice of maternal care has changed in the last few decades, contemporary expectant mothers may encounter far more, and more diverse, information about pregnancy, birth and motherhood than did their forebears. Importantly, these frames and imaginings of birth and motherhood not only affect how women feel and act during their pregnancies, but also how they decide about and experience maternal care and parenting (Green and Baston 2007; Haines et al. 2012; Hauck et al. 2007; Howell-White 1997; Jimenez et al. 2010).[4]

There is a generous body of literature on women's reproductive lives in the U.S., and the actors and institutions that engage with them (e.g., Armstrong 2000; Avishai 2007; Behar 2013; Bobel 2002; Bridges 2011; Davis-Floyd 1992; Davis-Floyd and Sargent 1997; Kimport 2012; Layne 2003; Markens 2007; Morris 2013; Morton and Clift 2013; Rothman 1982; Rothman 1989; Waggoner 2011). There is, however, little social science research on the perspectives (opinions, definitions, framings, preferences) of women *while they are pregnant*. Other scholars have

[3] Though such frames are not explicitly listed in Swidler's (1986, 2001) well-known "styles, skills and habits" trio, they are at the heart of the examples she uses to illustrate cultural tools. E.g., see case study discussions in the "Shifting Frames" section (p. 31), or Chapter 3 of Swidler (2001).

[4] The effect of pregnant women's' perspectives on individual outcomes is shown for maternal decisions (Howell-White 1997; Jimenez et al 2010) and outcomes (e.g., epidural use and mode of delivery; Green & Baston 2007), as well as for phenomena as diverse as urban adolescent boys' schooling and romantic relationships (e.g., Harding 2010), community engagement (Small 2004), and social movement success (Benford and Snow 2000), among others.

bemoaned this lack as well (Brubaker and Dillaway 2009; Campbell, Stanford and Ewigman 1996; Green 2012; Han 2013). Much of what exists on this topic is focused on international populations, which can tell us little about pregnancy in the United(Amnesty International 2010) States (e.g., Ivry 2010; Miller 2005; Nelson 2009; Oakley 1979).[5]

I chose to situate this study during the transition from pregnancy to motherhood because it allowed me to contribute empirical information to this subfield, and also because it represented an excellent empirical context in which to answer the theoretical questions I had posed about cultural resources. The best setting for testing the effects of cultural frame diversity is one in which (a) respondents confront similar experiences and timelines, (b) a variety of competing logics and practices coexist, (c) respondents identify and invest in particular plans and ideals, and (d) exogenous shocks frequently disrupt these envisioned plans. The period during which women are pregnant with, bear, and begin to raise their babies fulfills precisely this set of criteria. Childbirth and early parenting test the effects of cultural repertoires because they present individuals with problems to which they must respond symbolically, if not practically.[6] These novel experiences require women to make sense of their experience to themselves and sometimes to others. This provides a meaningful test of the degree to which repertoire diversity helps individuals to resolve new challenges. The resources new mothers have to evaluate, make sense of and justify their actions, then, have potentially important consequences.

In sum, I designed this study to investigate individual level cultural resources (frames and repertoire diversity) in a context that was both (a) a methodologically excellent fit to investigate how individuals gain, use and experience specific cultural resources, and (b) a context that needed empirical study, itself.

The Study

With a collaborating medical school research team, I collected longitudinal survey data in a variety of care settings in California's metropolitan Bay Area. We recruited pregnant respondents from five hospital-based clinics (two public, three private), two free-standing community clinics (one public, one private), an online parenting email group, and a home-birth email group, between winter 2009 and spring 2011.[7] The sample is not statistically representative of the prenatal care population in this region. Instead, we carried out purposive sampling in order to represent women who were receiving care at diverse institutions and who in the aggregate had a wide range of social, educational, and material resources; these patient populations differ in theoretically interesting ways (Small 2009).

The respondents completed up to three self-report surveys as they transitioned from

[5] In the context of Western, industrialized nations, the United States has a rather unusual maternal care system. The vast majority of women deliver with obstetricians, not midwives, the United States spends significantly more money on maternal care per capita than do counterparts, and our maternal and neonatal mortality rates are worse than most of these other countries (Wagner 2006; Amnesty International 2010).

[6] In the perinatal period, some of the problems mothers face cannot be acted on in a practical sense. A mother who wanted a "natural" birth but experienced a heavily medicated delivery, for example, can do nothing to change it postpartum. Her potential symbolic recourse, instead, is to interpret it, reframe it, and make sense of it to herself and others. New problems are an important focus around which to orient this study as they compel individuals to engage in the kind of explicit, verbalizing mode of thought that calls on sense-making tools. (See DiMaggio's (1997) discussion of deliberative thought, pp. 271-2; D'Andrade 1995; Vaisey 2009.)

[7] Survey data were collected in collaboration with a medical research group at a regional medical school, as well as seven apprentices participating in an undergraduate research apprenticeship program at U.C. Berkeley.

pregnancy through 2-3 months postpartum. Two of these surveys—one before birth, one after—were designed by the collaborating research team to collect information on respondent preferences regarding mode of delivery, as well as demographics, obstetric history, experience of childbirth, and postpartum depression symptoms. A second pre-birth survey, which I designed, contained the measure of cultural resources as well as measures on social network diversity, social support, personality, and other constructs. I also conducted longitudinal semi-structured interviews with 42 of these women before and after their births, and single interviews with another 25. I draw on data from these interviews for other research projects and to contextualize some patterns described in Chapters 1 - 3; I do not systematically analyze interview data here.

Over 300 pregnant women took the original, fieldwork-based "Cultural Heterogeneity" (CH) survey instrument, which collected data about their exposure to, and opinions about, diverse frames ("opinions") concerning practices relevant to pregnancy, birth and new motherhood. Data from different subsets of this group were used depending on what additional data were needed for analyses.

The Resulting Papers

This study has generated a wealth of data—concurrent and longitudinal, qualitative and quantitative. There are innumerable questions and papers I could pursue with these data and, indeed, I plan to draw on them for years to come. The three papers that I present here are some of the more theoretically-oriented of the projects I could have pursued.

In Chapter 1, I draw on data from the CH instrument to describe the "cultural landscape" of pregnant women. This paper is designed to generate a multidimensional view of the cultural frames that women encounter during pregnancy and thereby contribute to research in this subfield. I present an overview of respondents' exposure to the 29 frames measured in the survey, focusing on ways in which the cultural landscapes of more and less privileged women overlap and diverge. I investigate in detail respondent exposure to and opinions about three "spotlight" topics and the ways in which these vary across categories of race/ethnicity, educational achievement and insurance type. Finally, I explore variation across these same categories in terms of exposure to contradictory cultural frames.

For the remaining chapters I use the CH data to construct a "Cultural Repertoire Diversity" (CRD) score that measures individuals' familiarity with multiple (different) frames about a given topic. This is meant to describe respondents as having more or fewer cultural tools – here frames – that they could theoretically use to navigate the unpredictable terrain of new motherhood.

In Chapter 2, I use the CRD score as a dependent variable to investigate what individual-level factors promote having a diverse cultural repertoire. Drawing on cultural consumption and social networks literature, I test whether these factors, net of relevant controls, contribute meaningfully to repertoire diversity. Finally, in Chapter 3, I use the CRD score as an independent variable in order to assess the effect of repertoire diversity on individual well-being. Repertoire theory and many scholars that have engaged with it associate having diverse cultural tools such as frames as easing one's way; they help individual solve social problems and legitimate their actions and decisions. I operationalize this well-being in the peri-natal context in terms of respondents' experience of postpartum depression – a condition that has biological as well as social and cognitive causes. I then evaluate if CRD predicts lower frequency of postpartum depression symptoms, as the theory would suggest.

In the conclusion of the dissertation, I briefly summarize the findings of each of the three papers and discuss the implications of them for academic research and the provision of maternal care. Additionally, I characterize what contributions the three together make to scholarly knowledge and describe a research agenda for future work.

CHAPTER 1
The Cultural Landscape for Expectant Mothers: Contemporary Women's Exposure to and Attitudes toward Select Health- and Infant-care Practices

Abstract

Existing scholarship neglects key aspects of contemporary women's experiences of pregnancy, childbirth and new parenting in the United States. Specifically, few studies investigate how pregnant women perceive self-, birth- and infant-care practices, and those that do typically focus on narrow topics and narrow segments of the population. Moreover, these mostly ignore pregnant women's exposure to the variety of different, often contradictory, information that they encounter. I draw on original survey data from a diverse group of pregnant women in Northern California (n= 287) to describe the multi-layered "cultural landscape" that contemporary expectant mothers traverse. These data reveal both individuals' exposure to cultural ideas and their feelings about them. I describe the prevalence with which respondents encounter select ideas; their views of them; and variation in these by race/ethnicity and SES. Analyses show divergent—but not radically different—landscapes for more and less privileged women, and indicate that exposure to contradictory ideas about self-care and parenting practices is universal, though greater among highly educated women. Investigating these "cultural landscapes" contributes novel data to the study of pregnancy and birth in the contemporary U.S. and enriches the study of culture in health research.

Introduction

More than 85% of women in the contemporary United States have given birth by age 40 (Martinez, Daniels and Chandra 2012), and many women consider pregnancy and birth to be some of the most important moments of their lives (Bessett 2010; Han 2013; Nelson 2009; Oakley 1979). Unfortunately, the social sciences have done a relatively poor job of illuminating the complex, multifaceted perspectives women have on this widely-experienced, transformative event. What self-, health- and infant-care ideas do women encounter as they progress from pregnancy to parenting? What do they think about them? Are there meaningful differences in these across social groups? In short, what does the cultural landscape for contemporary pregnant women look like? I draw on original, multi-dimensional survey data that overcomes the limits of most research on pregnant women's perspectives in order to answer these questions. These new data contribute significantly to scholarship on this socially, emotionally and physiologically consequential life event. Moreover, they provide an important corrective to the over-simplified and outdated ways in which "culture" is typically measured and used in explaining health-related practices and outcomes.

Existing scholarship on pregnant women's perceptions is concentrated in the United Kingdom, Australia, Scandinavia, and to a lesser extent Canada and the US (e.g., Fenwick et al. 2010; Haines et al. 2011; Jouhki 2011; Miller 2005; Schneider 2002; Warren and Brewis 2004). In the U.S.-based research, women's views are often measured in terms of preferences about or perceptions of single topics or decisions. Less common are investigations into how women perceive multiple dimensions of their pregnancy landscape. Of those that collect these kind of data,

some use retrospective data, which are colored by experiences of birth and new parenthood; others are limited by homogeneous samples, which reveal little about what features of pregnancy may be universally experienced or conditioned by social location.

Missing from this subfield is research that richly describes the "cultural landscapes" that pregnant women from a variety of backgrounds traverse as they move from conception to giving birth. By this I mean an illumination of the practices, ideas, norms and decisions that these women encounter, as well as their feelings about them. To understand individual experience it is necessary to consider not only what opinions they have—something well-represented in scholarly literature—but also the variety of perspectives or "cultural frames" (Goffman 1974) that they have encountered prior to these opinions. For example, such inquiries would bring into view both what women think about whether a mother should breast-feed her newborn even if she does not want to (*endorsement* information), as well as whether they had previously heard competing ideas about it (e.g., "That a new mother should try to breast-feed whether or not she wants to," and "That if a mother does not want to breast-feed, that is good enough reason for her not to; *exposure* information). Such frames are the very building blocks of how individuals perceive their world (Berger and Luckman 1966; Goffman 1974). Their absence from systematic study in this and many other subfields has insured only a partial scholarly rendering of individuals' views.

I draw on original survey data in order to remedy this problem. These data document diverse women's exposure to and feelings about 29 different cultural frames that refer to practices, settings, and health outcomes relevant to the peri-natal period (e.g., effects of epidural use, alcohol use during pregnancy, breast-feeding versus formula feeding, etc.). Data were collected from women of different socioeconomic and race/ethnic backgrounds in the California Bay Area (n = 287) in order to enrich the study of pregnancy and motherhood—long dominated by research on middle- and upper-middle-class White women—and investigate variation in the landscape of contemporary pregnancy.

Analyses of these data show that women of higher and lower socioeconomic status share a considerable amount of common cultural terrain, but that their landscapes differ in measurable ways. For example, compared to women with publicly-provided health coverage, higher proportions of women with private insurance encounter more reassuring, less demanding, and more cynical cultural frames. In three extended "spotlight" analyses, I explore the relationship between women's familiarity with these ideas and their opinions about them, finding that the patterns of a population's endorsement of a cultural frame do not reliably mirror patterns of its exposure to it. In the same analyses I find that race/ethnicity is often, but not always, a key predictor of exposure and opinion. Finally, I investigate pregnant women's exposure to contradictory ideas about these topics. I find that all women encounter them, but that it is greater among more highly educated, and, to a lesser extent, White and Latina, women

At the end, I discuss the relevance of these data for the study of maternal care, as well as the applicability of the survey instrument to other empirical settings. These findings add new information and insights to scholarship on women's reproductive lives in the contemporary United States. By measuring multiple dimensions of culture, this study can contextualize existing research on these topics and provide a model for the study of culture in health research more generally.

Perspectives of Pregnant Women in the Contemporary United States

In United States, pregnancy and birth are experienced by the vast majority of women and their families. Many women describe these events as a key turning point in their lives—as a period in which they establish a different sense of themselves and their intimates, and different

relationships to the medical establishment (Glenn, Chang and Forcey 1994; Hartrick 1996; Lee 1997; Miller 2005; Miller 2007; Nelson 2009; Oakley 1979; Shelton and Johnson 2006). During this period, new information, advice, identities and concerns enter, solicited or not, into women's lives. And, because of the availability of Internet-based health information and online communities of mothers, and the pace with which the practice of maternal care has changed in the last few decades, contemporary expectant mothers may encounter far more, and more diverse, information about pregnancy, birth and motherhood than did their forebears. Importantly, these frames and imaginings of birth and motherhood not only affect how women feel and act during their pregnancies, but also how they decide about and experience maternal care and parenting (Green and Baston 2007; Haines et al. 2012; Hauck et al. 2007; Howell-White 1997; Jimenez et al. 2010).[8]

As evidenced below and noted elsewhere, there is surprisingly little social science research on the perspectives (opinions, definitions, framings, preferences) and experiences of pregnant women (Brubaker and Dillaway 2009; Campbell, Stanford and Ewigman 1996; Green 2012; Han 2013). Moreover, much that exists is focused on international populations, which can tell us little about pregnancy in the United States (e.g., Ivry 2010; Miller 2005; Nelson 2009; Oakley 1979).[9] Below I summarize mostly recent research about pregnant women's perspectives that is based in the United States. Some have investigated these perspectives directly, but others shed light on them in the course of studying other topics. Most reveal perceptions about a one stand-alone topic, though some illuminate a broader landscape.

Perspectives on Stand-alone Topics

What women think about exercise, and about the appropriate amount of exercise, during pregnancy has received some scholarly attention. This is perhaps because physical activity is an actionable and consequential practice that providers consider to be in their purview to advise. Professional recommendations about amount of exercise has varied over time and is unclear to many women (Evenson and Bradley 2010). Krans et al (2005) found that the vast majority of pregnant women in a private OB/GYN practice (n = 211) sample perceived prenatal exercise to be "helpful." More recently, Evenson and Bradley (2010) surveyed women in North Carolina when they were 27 - 30 weeks into their pregnancies about various beliefs about exercise. The vast majority of women in the study believe that regular exercise was better for women than irregular exercise (89%), that light activity was beneficial (98%), and, less so, moderate activity (73%), and that women could continue their regular exercise programs during their pregnancies (78%). These beliefs varied by race and education and, to a lesser extent, other measured characteristics.[10]

Scholarship has also shed some light onto pregnant women's perceptions of biomedical authorities and the advice and information that issue from them. In the late 1980s and early 1990s, Browner and her colleagues (Browner and Press 1996; Root and Browner 2001) investigated how 158 Christian White and Mexican-American women receiving care at one of five Southern

[8] The effect of pregnant women's' perspectives on individual outcomes is shown for maternal decisions (Howell-White 1997; Jimenez et al 2010) and outcomes (e.g., epidural use and mode of delivery; Green & Baston 2007), as well as for phenomena as diverse as urban adolescent boys' schooling and romantic relationships (e.g., Harding 2010), community engagement (Small 2004), and social movement success (Benford and Snow 2000), among others.

[9] In the context of Western, industrialized nations, the United States has a rather unusual maternal care system. The vast majority of women deliver with obstetricians, not midwives; the United States spends significantly more money on maternal care than does its counterparts; and its maternal and neonatal mortality rates are notably worse than those in other developed countries (Wagner 2006; Amnesty International 2010).

[10] Women who were educated, white, and who themselves exercised during their pregnancies were more supportive of moderate and regular exercise that were other women (Evenson & Bradley 2010).

California health maintenance organizations received and navigated what their prenatal care providers were telling them. The studies are not explicitly about women's perceptions, but an overview of the qualitative data reported in these shows that these pregnant women varied, from individual to individual and, individually, over time, in how seriously they took practitioners advice or valued it over that which they or their social contacts thought. These women viewed their practitioners as valuable but not infallible. They perceived their own phenomenologically based "authoritative knowledge" and the wisdom of friends and family as equally or occasionally more true than that coming from their care providers.

Scholars in sociology, anthropology, and women and gender studies have over the last 30 years dedicated significant attention to childbirth in the United States, focusing on its increasingly medicalized character, the rise of medical interventions into low risk birth, and women's experiences of childbirth in this context (e.g., Davis-Floyd 1992; Rothman 1982; Simonds, Rothman and Norman 2007). However, very little scholarly attention has gone to how women themselves view birth *during pregnancy*, before their own births have had the chance to color their views of the process and the associated actors and institutions. Lowe (2000) is a rare exception, having studied fear of childbirth among a sample of predominantly "White, well-educated, and middle-class" women who had not previously given birth. Lowe characterized women in her sample as having high or low levels of fear about childbirth, and discovered that the two groups had qualitatively different fears and imaginings about childbirth. Another scholar measured women's conceptualizations of birth as more or less risky (Howell-White 1997). These scores were consolidated into "definitions" of birth and used to predict women's choice of birth attendants. However, the study did not explore or discuss these definitions themselves.

Finally, some scholars have studied the views of pregnant women in very specific homogenous samples in order to learn about topics theorized or known to be experienced differently by women in particular populations. Fleuriet (2009) investigated views of social support among pregnant Mexican immigrants in Texas. Social support has been a favorite research topic of scholars of maternal health in trying to understand the mechanisms underlying the "Latina paradox," wherein immigrants who have little or no prenatal care and few socioeconomic resources have better birth outcomes and newborn well-being than do women with far more resources (Abdou 2010; De la Rosa 2002). Fleuriet's respondents varied in what kind of social support they wanted, how much and from whom, illustrating the diversity of perceptions about even this one topic among what is commonly considered a unitary "cultural".

In a study prompted by the possible development of an "Amish" birth center in the 1980s, Campanella, Korbin and Acheson (1993) investigated what local women thought of their existing and potential maternal care options. They found that Amish women from the same small community in Ohio had different views on the appeal of birthing at the regional hospital versus at a community birth center. More recently, Puri et al (2011) investigated perceptions of South Asian Indian immigrant women on the East and West coasts of the U.S. who were pursuing sex-specific fetal selection. The interviews revealed that, though the respondents did not necessarily agree with the "phenomenon of son preference," they acknowledged and were motivated by the value of having a son and the legitimating effect it would have on them as mothers. They perceived doing what they could to have a son as a rational pursuit, and viewed raising daughters in the United States as particularly fraught. Though many of these women struggled with their participation in fetal sex selection and wished to keep their decisions discrete, they did not perceive their actions as "harmful or bad."

Perspectives on Constellations of Topics

Far fewer studies have been designed to study women's perspectives about the myriad topics and choices that they encounter during pregnancy. Such approaches are especially valuable because they can reveal the clustering of perspectives that together may reflect and/or shape individuals' broader orientations (e.g. to medical institutions, intensive mothering, consumerism) and even outcomes (e.g., emotional, mental, physiological).

Most of these rich investigations have been done in the context of qualitative studies, though one survey study stands out as collecting women's views about an impressively wide variety of topics relevant to birth, pregnancy and early motherhood: Childbirth Connection's "Listening to Mothers" series. The survey has been fielded three times in the last decade with three nationally-representative samples of women in United States who gave birth to single babies in hospitals. In addition to soliciting women's reports about events in their labor and delivery—a major contribution to understanding contemporary maternal care—the surveys collected data on women's perspectives about issues such as their attitudes toward cesarean sections, the amount of information they would want to know about various medical complications and interventions, the role of medical intervention in birth, the role of malpractice insurance in physician practices, and the desirability of breast-feeding, to name a few. Unfortunately, all of the data were collected postpartum, which arguably reveals more about the experience of birth and breast-feeding than expectations of it. But a couple of questions that explicitly asked women to access the point of view they had before birth provides some information about pregnant women's perspectives.

Listening to Mothers II data show that as they approached labor, almost 3 out of four pregnant women felt "confident" (Declercq et al. 2006). Just over one half reported feeling fearful, and nearly one quarter felt unprepared. These feelings varied by maternal status, with first-time mothers less confident, more fearful and more unprepared than their more experienced counterparts. The survey also asked about the effects that TV shows about birth had on the respondents "as a pregnant woman" (p. 25). Approximately one-half of all respondents said that the shows help them understand "what it would be like to give birth" and helped them "learn about medical words and technology." These figures were even higher for first-time mothers, at 72% and 48%, respectively. We can infer that many women in the contemporary U.S. view these types of programs to be legitimate sources of information about birth and maternity care.

Addressing a smaller but still diverse range of topics is a recent qualitative study by anthropologist Han (2013) about the experiences of her middle-class and nearly all-White sample of 15 women as they progressed through "medically unremarkable," "ordinary" pregnancies. Her extensive ethnography reveals that women's acceptance of and attachment to their pregnancies and fetuses is not automatic nor experienced the same way even within this relatively homogeneous group. Han finds that the her respondents' perceptions of their pregnancies and future children as "real" and "present" were dependent on their having participated in practices such as baby showers, buying and receiving gifts for the baby, reading advice books and talking to the fetus.

The works of Brubaker and Dillaway (Brubaker and Dillaway 2008; Brubaker and Dillaway 2009; Dillaway and Brubaker 2006) compare data from three related data collection projects that represent the experiences of a group of pregnant Black teenagers in the South (n = 51), and two small groups of White middle-class women in the mid-Atlantic region, some of whom had already birthed in hospitals (n = 19) and some at home (n = 18). Focusing on how these women in their own words characterized birth and epidural anesthesia use, they illuminated nuanced information about pregnant women's perceptions. For most of the respondents, the use of an epidural or not was what distinguished a "natural" birth from a medicalized one (Brubaker and

Dillaway 2008). The authors found also that women varied in whether having a natural birth was appealing to them, and that this appeal, at least among White middle-class mid-Atlantic respondents, turned on the way in which they wished to be "in control" in labor and delivery (Dillaway and Brubaker 2006). The teenage, Black, Southern respondents were less concerned about control in birth, but more concerned about the potentially harmful effects of epidurals for women. By eliciting diverse women's perceptions of these events and options, the authors were able to detect variation in perspectives and patterns that in a homogenous sample could have gone unnoticed or been understood as universal.[11] Moreover, this allowed Brubaker and Dillaway (2009) to discover that women craft and use definitions that deviate from those of the feminist scholars who characterize women and their births as "natural" or "medicalized" (e.g., Davis-Floyd 1992).

Finally, in a longitudinal study Bessett (2010) investigates "women's perceptions of the problems in prenatal care and the strategies they employ to resolve them" in a diverse group of 67 expectant mothers in and around New York city (p. 371). Her data show that these women perceive "good mothers" as those who will prioritize doing anything for the well-being of their fetus, which often means carefully monitoring pregnancy symptoms and dutifully ensuring that they are not worrisome. Additionally, these respondents view "good patients" as those who do not ask too much of their provider and do not overreact to "normal" symptoms. By considering pregnant women's perspectives about multiple salient topics, Bessett discovers that these contemporary pregnant women face a "double-bind" wherein they cannot simultaneously realize the ideals of the "good mother" and the "good patient."

Gaps in the Literature

There is rich survey and ethnographic work on many aspects of—and actors and institutions relevant to—U.S. women's reproductive lives (e.g., Armstrong 2000; Avishai 2007; Behar 2013; Blum 1999; Bobel 2002; Bridges 2011; Davis-Floyd 1992; Davis-Floyd and Sargent 1997; Kimport 2012; Layne 2003; Markens 2007; Morris 2013; Morton and Clift 2013; Rothman 1982; Rothman 1989; Waggoner 2011). There is, however, little social science research on the perspectives (opinions, definitions, framings, preferences) of women in the United States *while they are pregnant*. Other scholars have bemoaned this lack as well (Brubaker and Dillaway 2009; Campbell, Stanford and Ewigman 1996; Green 2012; Han 2013).

Most studies that address perceptions during pregnancy focus on single issues at a time; the few studies that explore a larger range of topics are able to illuminate more of the cultural terrain, but most of those reflect the experiences of a narrow segment of women (Han 2013), or of samples in which some or most are retrospectively reporting their perceptions from pregnancy (Brubaker and Dillaway 2008; Declercq and Chalmers 2008; Declercq et al. 2008; Declercq et al. 2013b; Dillaway and Brubaker 2006). Moreover, few of these scholars have touched on pregnant women's encounters with contradictory ideas and advice (for exceptions see Bessett 2010; Root and Browner 2001).

What is missing from research on expectant mothers' experiences is a contemporary, individual-level study that systematically measures the perspectives this population has about a constellation of topics, and does so for a large and diverse group of women in the U.S. These data would illuminate important characteristics of the cultural landscapes that pregnant women traverse, and the different (or not so different) paths that characterize different groups. Such a

[11] Of course, they could not with these data distinguish between race, age, class, and regional effects. They consider this to be a "pilot" study.

study would generate more nuanced research on how pregnant women perceive and evaluate the world around them, as called for by scholars in public health and the social sciences(Brubaker and Dillaway 2008; Campbell, Stanford and Ewigman 1996; Entwistle et al. 1998; Green 2012; Han 2013).

Generating richer data on American pregnant women's perceptions in the ways I describe here, and present below, is important for both empirical and methodological reasons. First, only by expanding research in such a way can scholars provide a more complete empirical description of a widely-experienced event that many individuals consider one of the most important of their lives. The novel data can contribute to medical sociology, women's studies and public health. They can also be useful to practitioners who care for these women and their families and wish to more fully understand the experiences and views of pregnant women.

Second, attending to exposure to and feelings about specific ideas affords scholars the opportunity to directly measure a key aspect of culture at the individual level. As posited in cultural repertoire theory, these are some of various cultural tools that help individuals to navigate social life (Swidler 1986; Swidler 2001). Individuals use these interpretive frames to evaluate an interaction, read a situation, and know the approximate rules of the game (Goffman 1974). These frames operate on an emotional level as well, clueing the individual in to what the "feeling rules" are for a given interaction or social setting (Hochschild 1979). In sum, these are the very building blocks with which individuals perceive, make sense of and act in the world, and they help shape individuals' outcomes—health-related or otherwise. These are valuable data that are rarely, if ever, systematically collected in surveys. Moreover, directly investigating pregnant women's perspectives provides the opportunity to move past the theoretically and empirically problematic practice of using race, ethnicity, immigrant status or nationality as proxies for "culture," as has been done extensively in medical and health scholarship (Dressler 2012; Kagawa Singer 2012; Unger and Schwartz 2012).

DATA AND METHODS

I collected data via an original "Cultural Heterogeneity" (CH) survey instrument, which I designed to investigate pregnant women's exposure to, and opinions about, diverse statements concerning practices relevant to pregnancy, birth and new motherhood. First, to develop the CH instrument, I conducted observations of prenatal/new mother classes as well as over a dozen expert interviews with obstetricians, midwives, labor and delivery nurses, and birth coaches (*doulas*). Next, with a collaborating medical research team, I collected longitudinal survey data in a variety of care settings representing different institutions and communities. We recruited pregnant respondents from five Northern California hospital-based clinics (two public, three private), two free-standing community clinics (one public, one private), an online parenting email group, and a home-birth email group, between Winter 2009 and Spring 2011.[12] Based on my review of existing literature, this represents the only large-scale survey on pregnant women's cultural landscape.

The respondents completed up to three self-report surveys as they transitioned from pregnancy through 2-3 months postpartum. Two of these surveys--one before birth, one after--were designed by the collaborating medical research team to collect information on respondent preferences regarding mode of delivery, as well as demographics, obstetric history, experience of childbirth, and postpartum depression symptoms. A second pre-birth survey, which I designed, contained the CH measure as well as measures of social network diversity, social support,

[12] Survey data were collected in collaboration with a medical research group at a regional medical school, as well as seven apprentices participating in an undergraduate research apprenticeship program at the study author's institution.

personality, and other constructs. I also conducted longitudinal semi-structured interviews with 42 of these women before and after giving birth, and single interviews with another 25. I draw on observations from these interviews to contextualize some patterns described below.

The sample is not statistically representative of the California Bay Area. Instead, we carried out purposive sampling in order to represent women who were receiving care at diverse institutions and who in the aggregate had a wide range of social, educational, and material resources; these patient populations differ in theoretically interesting ways (Small 2009).

Over 325 pregnant women began the CH module. Of these, the 287 individuals who completed over 90% of its questions were used in analyses here.[13] Respondents varied considerably with regard to race/ethnicity, education level, and maternal status, though the sample, like much research on motherhood, skews toward the more privileged (see Table 1). The sample is roughly split between patients with Medi-Cal—California's version of Medicaid, which is available to pregnant women who do not have the resources to obtain private insurance—and women with private insurance. An additional 16% of the sample has no insurance. Just over one half are first-time mothers.[14] Approximately one out of five respondents did not report education information. Of those who did, the majority had high levels of education: 7% had up to a high school degree; 14% had some college education, 23% completed college, and 36% had earned a graduate degree. Just over one half of respondents were White (54%), followed by Latinas (12.5%), African-Americans (12%) and Asian/Pacific Islanders (10%). Small numbers of respondents described themselves as multiethnic (3.5%) or "other" (2.8%). None self-described as Native American and 5% had no race/ethnic data associated with their file.

Measures

Cultural Frames. This survey instrument measured the diversity of opinions or "cultural frames" (Goffman 1974) that the respondents could use to interpret (evaluate, make sense of) practices and outcomes specific to pregnancy, childbirth, and early parenting. This draws on the "repertoire" theory of culture (Swidler 1986; Swidler 2001), which posits that culture affects social life not by providing orienting values, but by providing individuals with resources with which to act (e.g., styles of self-presentation, interpretive frames with which to perceive and evaluate social situations, etc.). Conceptualizing culture in terms of the resources it provides offers significant conceptual and methodological advantage over proxy measures of "culture" often used in health research (e.g., race, ethnicity, time in a host country).

I designed this "Cultural Heterogeneity" instrument to assess contemporary pregnant women's exposure to, and feelings about, a variety of ideas relevant to practices and processes in pregnancy, childbirth and early parenting. In order to investigate the understudied phenomenon of contradiction in contemporary pregnant women's experience, and in order to generate data that I could also use to operationalize a particular aspect of cultural theory (see Garrett 2013c), I wrote these survey questions as matched sets of ideas that are contradictory with one another.[15] Each opinion item is part of one of 12 sets of two or three opposed statements that are scattered randomly throughout the list of 29. (For example, there is both "All in all, epidurals are *good* for birthing

[13] 95% of this group (n=287) had complete data on the series of 29 questions. The remaining respondents missed answering either one (11) or two (4) questions. These missing items were coded conservatively as "no" responses.

[14] This category is comprised of women who "have not been the mother of an infant before." The question was written that way in order to operationalize a status that means different things to different people.

[15] There are many other behaviors and outcomes in the transition to first-time motherhood that might have been good candidates, but which were excluded because there were not concise, mutually exclusive frames with which to match them.

women," and "All in all, epidurals are *bad* for birthing women." See the full list below.) [16] For each one the respondent is asked if she is familiar with the opinion; from what source(s) she had heard it (social contact, institutional and media); and what she thinks about it (*strongly agree* through *strongly disagree*). This design permits investigation into many dimensions of exposure to and opinion about ideas: on the level of topics, individual ideas within those topics, and with regard to ideas that oppose one another.

This collection of items is based on cultural frames I heard used during pilot fieldwork in prenatal care classes, new mother's groups, and interviews with providers. I selected twelve topics that overlapped minimally with those of the other surveys in the series of which this was a part. Although this module does not—and indeed a finite survey could not—address every kind of idea contemporary pregnant women may encounter, the resulting data provide novel and illuminating information.[17]

List of Frames in the Cultural Heterogeneity Survey

Physical activity during pregnancy (Table 2)

That women should become *less* physically active while they are pregnant. / That women should *maintain* their normal level of physical activity while they are pregnant. / That women should become *more* physically active while they are pregnant.

Factors that affect fetal health (Table 3)

That an unborn baby's health depends on *God more than anything else*. / That an unborn baby's health depends on *genetics more than anything else*. / That an unborn baby's health depends on the *mother's actions more than anything else***.**

Pregnancy as inherently or instrumentally valuable (Table 4)

That pregnancy itself is a great experience. / That there is nothing great about pregnancy except for the baby.

[16] Note that this measure is grounded in a very particular socio-historical context. Based on the six months of ethnographic fieldwork I conducted in 2009, this variety of interpretive frames is specific to the context of contemporary childbirth education, prenatal care, and new mother support provided to women across socioeconomic strata in this particular region.

[17] Some topics about which there is great disagreement in some circles but which are not included in the instrument include whether homebirth is a safe practice; whether standard hospital-based labor and delivery practices serve women's best interests; whether patients should be able to request cesarean birth in the absence of medical indication; and whether it is appropriate to breastfeed toddlers and older children. Many questions on the accompanying surveys were about birth preferences and practices, which is why few of the items in the CH survey are about these.

Drinking during pregnancy (Table 5)

That it is *OK* for a pregnant woman to drink a glass of wine or beer every now and then. / That it is *good* for a pregnant woman to drink a glass of wine or beer every now and then. / That it is *never OK* for a pregnant woman to drink a glass of wine or beer.

Epidural use (Table 6)

That, all in all, epidurals are *good* for women in labor. / That, all in all, epidurals are *bad* for women in labor.

Risk in labor and delivery (Table 7)

That it is *common* for women to have serious complications during labor and delivery. / That it is *rare* for women to have serious complications during labor and delivery.

The value of breast milk vs. formula (Table 8)

That breastmilk and formula are *equally good* for infants. / That *breastmilk* is better than formula for infants. / That *formula* is better than breastmilk for infants.

The acceptability of nursing boy vs. girl babies (Table 9)

That it is more acceptable to nurse a *boy baby* than a girl baby. / That it is more acceptable to nurse a *girl baby* than a boy baby. / That it is *equally acceptable* to nurse girl and boy babies.

The timing of baby feeding (Table 10)

That babies should be fed on a *set schedule*. / That babies should be fed *whenever they seem hungry*.

Breastfeeding as compulsory or optional (Table 11)

That a new mother should try to breastfeed *even if she does not want to*. / That if a new mother does not want to breastfeed, *that is a good enough reason for her not to*.

Birth as empowering vs. embarrassing (Table 12)

That giving birth is an *empowering* experience. / That giving birth is an *embarrassing* experience.

Babies' ability vs. inability to deliberately manipulate parents (Table 13)

That young babies try to manipulate their parents *on purpose*. / That young babies *cannot* try to manipulate their parents on purpose.

Insurance type. This measure indicates the type of insurance the respondent had for prenatal and birth care: private insurance or Medi-Cal, California's Medicaid program for low-income individuals. These data come primarily from respondent reports; for women receiving care at public safety-net clinics who had not reported insurance information, the data is back-filled as Medi-Cal. Over 15 percent of the sample has no insurance data. Note that private patients received care at private clinics or at home in preparation for homebirth. Patients with Medi-Cal in most cases received care at large public hospitals or community safety net clinics; A small proportion of respondents with Medi-Cal coverage in fact received care at clinics that primarily served patients with private insurance because they were referred there for their particular health needs (e.g., gestational diabetes, high-risk pregnancies, anticipated needs for neonatal intensive care for the newborn, etc.) This group includes some women with Medi-Cal who were seen at private clinics. However, it is likely comprised primarily by women with private insurance, as it includes sizeable proportions of women who were recruited into the survey via internet-based discussion groups, which are less accessible to women with few social resources, and social networks connected to these.[18] High rates of missing data on household income and inconsistent information about household size made income data inappropriate for use as an indicator of economic resources or hardship.

Education is measured as having completed one of three levels of schooling: some college or less; completed college; and completed graduate school. Despite intensive attempts to recruit a broader sample, a majority of the respondents have a college or graduate degree. This skew in the distribution of education modestly constrains its explanatory power in analyses.

Respondent race/ethnicity is comprised of six self-report categories: (1) Asian American or Pacific Islander; (2) African American or Black; (3) Hispanic; (4) Native American; (5) White; (6) Multi-ethnic or Other. No respondents reported "Native American."

Analytic plan

In Section A, below, I attempt to sketch out the landscape of contemporary pregnancy as experienced by my respondents. (These are of course not all possible ideas to which women are exposed, but they represent a salient and large selection.) First I focus on the contours of the cultural terrain that are similar across focal groups. Then I describe differences between the landscapes of these different groups. I focus here exclusively on the ideas that exist in these spaces—those with which these pregnant women are familiar—not their opinions about them. Such exposure is a valuable focus for two chief reasons: because it has not been systematically studied in this context, and because such frames are the foundation of how individuals perceive the world around them (Goffman 1974). These interpretive frames represent key resources in individuals' "cultural toolkits"; agreed with or not, these shape individuals' understanding and evaluation of, and abilities in, social life (Swidler 1986; Swidler 2001).

[18] The group of women with no health insurance data includes approximately one-third of the women who were recruited into the survey from a large local online parenting discussion forum, two-fifths of the women recruited from a local homebirth online discussion group, and two-fifths of the women who were recruited some "other" way, which was primarily through other social media

In order to explore meaningful differences, I focus on items for which the proportion exposed to an idea differs across quartiles of the populations measured. That is, I would consider one group's terrain to be meaningfully different from another's if, for example, more than three out of four people in one group were exposed to an idea whereas only two to three out of four people in another group were. This criterion helps ensure that these different distributions reflect meaningful differences in what I am describing as the cultural landscape as opposed to reflecting merely statistically significant differences.

In Section A, in the interest of space, I present comparisons exclusively between respondents with public insurance and those with private insurance. This distinction is simple but represents a parsimonious way to compare respondents with, on average, higher and lower socio-economic status. Insurance type in this sample is highly correlated with levels of educational achievement and, to a lesser extent, race/ethnicity. The public/private distinction therefore acts as shorthand for different institutions with which these women are interacting; for higher versus lower education (79% of those with a college degree and 96% of those with graduate degree have private insurance; 100% of those with up to a high school degree, and 81% of those with some college have public insurance); and, in most cases, for White respondents (84% private) versus Black and Latina respondents (97% and 94% public, respectively). Patterns for Asian/Pacific Islander respondents are obscured here, unfortunately, as they are split evenly between public and private insurance. Note that distributions by insurance type, race/ethnicity and educational achievement can be found in Tables 2 through 13.

In Section B, I provide an in-depth exploration of the cultural frames that my respondents encounter as well as how they feel about three different "spotlight" topics. Here I consider differences by insurance type as well as race/ethnicity and education level, and I bring in insights from multivariate regression when relevant. (The variables used in the multivariate regression models include the three main insurance, education and race/ethnicity descriptors as well as relevant controls: respondent age, time in months between having answered the cultural heterogeneity survey and the respondent's due date, and her status as a first-time or experienced mother.)

This section is intended to provide a richer view of variation across a variety of characteristics, as well as to show the combination of exposure to and endorsement of cultural frames, which I did not have space to do for all of the topics. I selected these for analysis because they represent practices and settings that are especially interesting to health and public health research.

Finally, I close the findings section with Section C, where I provide an overview of respondents' exposure to contradiction on their paths to new motherhood.

In all analyses, I exclude from discussion the subgroups that have fewer than 20 respondents as there is little statistical confidence in figures associated with these. The subgroups are nevertheless included in the tabled data and the analyses, which means that tests of significance are more conservative than they would be had these groups been excluded. When I discuss group-based variations in exposure or agreement in Sections A and B, I focus on those that are statistically significant as identified by chi-squared tests or multivariate logistic regression. In Section C, I use chi-squared tests and multivariate logistic regressions for the binary outcomes, and Kruskal-Wallis tests and multivariate negative binomial regressions for count outcomes (e.g., the number of topics in which respondents know multiple frames). Stata 13 was used for all analyses.

FINDINGS

A. Mapping the Landscape

Similarities

The survey shows that there are some ideas to which all respondents are exposed: specifically, the ideas that pregnancy itself is a great experience—which I describe in short-hand as the "inherently valuable" pregnancy frame—and the idea that breast milk is better for infants than formula. Between 97% and 100% of respondents across all measured sub-groups were familiar with these ideas. For the rest of Section A, I focus on similarities and differences between the landscapes of women with Medi-Cal coverage and private insurance coverage. See Tables 2 - 13 for data on individual frames, and Table 14 for a text-based overview of similarities and differences between these two groups.

Other features of both insurance landscapes were similar, though they did not reach such universal levels. More than three out of four women in both groups had heard the ideas that infants should be fed whenever they seem hungry (Medi-Cal: 80%, private: 98%), and its opposite, that they should be fed on a set schedule (75%, 89%). These frames were "very common" in both landscapes. Between two and three out of four respondents in each group (50 - 74%) were familiar with the idea that women should exercise less during pregnancy (50%, 58%), and that epidurals are good for birthing women (54%, 64%). I describe these as "common" in the landscapes.

Between one and two women out of four in both groups were familiar with the following five cultural frames: that an unborn baby's health depends on God more than anything else (46, 27%), that drinking a glass of wine or beer every now and then during pregnancy is good (42, 28%), that breast milk and formula are equally good for babies (41%, 36%), that young babies try to manipulate their parents on purpose (33%, 40%), and that an unborn baby's health depends on genetics more than anything else (36%, 34%). I describe these as "less common" features of the cultural landscape. Finally, in the lives of both women with public insurance and women with private insurance, three of the measured ideas were uncommon—even rare—given the very low proportions of both groups that were familiar with them: that formula is better than breast milk for infants (11%, 7%), that it is more acceptable to nurse a boy baby than a girl baby (7%, 1%) and that it is more acceptable to nurse a girl baby than a boy baby (7%, 1%).

Differences

The patterns above show that pregnant women from different social locations traverse much of the same cultural terrain. But there is also a great deal of variation underlying other items that the survey measures. Below I discuss cases where the group average for exposure to the cultural frame is one quartile for the public insurance respondents and a different quartile for respondents with private insurance. Sometimes I will describe the quartiles as referring to, for example, more than three out of four individuals, or between two and three out of four individuals. Other times, for readability, I will report to the different quartiles in the following shorthand, as introduced above: very common (75% or more), common (50% to a 74%), less common (25% to 49%), uncommon (less than 24%).

Three out of four women with Medi-Cal are familiar with the frames that maternal behavior has the biggest effect on an unborn baby's health (75%), that a new mother should try to breast-feed even if she does not want to (83%), and that it is equally acceptable to breast-feed boy and girl babies (79%). Between two and three out of four of this group are familiar with the frames

that pregnant women should maintain their normal level of physical activity while they are pregnant (73%), that drinking is never okay (72%), that giving birth is empowering (69%), that drinking alcohol during pregnancy is okay (67%), that it is common for women to have serious complications during labor and delivery (58%), and that women should become more physically active when pregnant (50%). Other frames are less common, familiar to less than half of the women in this group. Between one and two women out of four have heard that serious complications in labor and delivery are rare (42%), that if a new mother does not want to breast-feed, that is good enough reason for her not to (39%), and that epidurals are bad for women in labor (32%). Finally, one out of four women with Medicaid coverage is exposed to the frame that birth is an embarrassing experience (22%), that there is nothing great about pregnancy except for the baby (19%), and that young babies cannot try to manipulate their parents on purpose (15%).

Women with private coverage encountered these same frames at different rates than did their counterparts with Medi-Cal. The frames that were very common in the private insurance landscape—familiar to more than three quarters of these women—were the ideas that birth is an empowering experience (95%), that women should maintain their same level of physical activity while they are pregnant (92%), that drinking a glass of wine or beer every now and then is *never* okay for pregnant women (90%), and that drinking a glass of wine or beer every now and then is okay for a pregnant woman (89%). Between two and three out of four women in this group recognized the frames that it is rare for women to have serious competitions during labor and delivery (73%), that, all in all, epidurals are bad for women in labor (71%), that it is equally appropriate to nurse a boy baby and girl baby (64%), that if the new mother does not want to breast-feed that is a good enough reason for her not to (63%), that a new mother should try to breast-feed even if she doesn't want to (63%), that an unborn baby's health depends on the mother's actions more than anything else (59%), and that young babies cannot try to manipulate their parents on purpose (55%).

Less common, familiar to between one and two women out of four with private insurance coverage, were the cultural frames that there is nothing great about pregnancy except for the baby (42%), that giving birth is an embarrassing experience (41%), that women should become more physically active while pregnant (32%), and that it is common for women to have serious complications during labor and delivery (32%). No frames were familiar to fewer than one out of four in this group aside for the three frames that were similarly rare among women with Medi-Cal insurance, described above in the "Similarities" section.

Surveying the landscapes of women with Medi-Cal and women with private insurance side by side, there is substantial commonality between them: fourteen of the measured items are present approximately equally in both. But they vary in measurable ways as well. Women with public and private insurance both are exposed to cultural ideas that prescribe or imply parameters of appropriate maternal behavior. In the Medi-Cal landscape, the features that are more prominent are the ones about maternal behavior affecting unborn babies more than anything else, about pregnant women needing to exercise more, and about breast-feeding being compulsory. In the private insurance landscape, the more common ideas are the ones about alcohol consumption being unacceptable during pregnancy, and epidural use being bad for birthing women. These items, no matter individuals' feelings about them, indicate that maternal behavior relevant to these topics is subject to social, and in some cases institutional, evaluation.

The landscapes differ, however, in that several frames that indicate less judgment, more flexibility and fewer demands on the mother are more prominent in the landscapes of women with private insurance. These frames say that women should maintain the same level of exercise, that

drinking is okay, that breast-feeding is optional, and that young babies cannot deliberately manipulate their parents.[19] Moreover, in other respects where the two differ, the private women's landscape has more prominent positive and reassuring features (birth as empowering, serious complications as rare in labor and delivery), whereas more prominent in the public landscape is a particularly ominous frame (serious complications as common in labor and delivery). The remaining difference, which has no clear comparison with the Medi-Cal landscape, is evidence of greater exposure to cynical or less romantic frames among women with private insurance: birth as embarrassing and pregnancy as only instrumentally valuable.

Ultimately, the landscapes of women with public and private health coverage share a good amount of common ground, but differ in ways that expose Medi-Cal patients to ideas that are more evocative of judgment, danger, and demanding self- or infant-care practices; whereas women with private insurance are more exposed to a mix of ideas evocative of judgment *and* flexibility, low and high demand, more positive and reassuring ideas, and cynicism.

B. Spotlights on the landscape

As there is not space here to present in-depth analyses for all 12 topic sets, I narrow my focus here to provide a richer analysis of three topics—six individual items—that are the source of significant differences in the landscapes of the women in this study: the compulsory or optional nature of breastfeeding, epidural use as good or bad for women in labor, and assessments of risk in labor and delivery.[20] The analyses here present nuanced patterns of both exposure *and* opinion, as well as variations beyond just differences in insurance type. For these spotlight analyses I also present information from accompanying multivariate regressions, when relevant, in order to identify which group-based differences best explain variation in exposure to or endorsement of these frames, net of other relevant factors.

i. Breast-feeding as Compulsory or Optional (Table 11)

The topic of breastfeeding as a compulsory or optional practices is salient to many women, as numerous figures and institutions in the prenatal landscape (individual clinicians, W.I.C. counselors, family and friends) espouse views on the importance (or lack thereof) of breast-feeding (Blum 1999; Waggoner 2011). It is a practice whose beneficial effects for women and babies are widely publicized but whose value and feasibility in the context of contemporary American family life have been contentious (Blum 1999; Rosin 2009). Public discourse has in many ways evolved into hyperbolic messages equating breast-feeding with good motherhood and formula feeding with selfishness, lack of sufficient commitment to infant health, and even child abuse (Rabin 2006; Warner 2006). Far less publicized is the idea that a mother's wish not to breast-feed is a legitimate reason for her not to, though practitioners like lactation consultants are sensitive to such reasoning

[19] Based on my fieldwork, this frame implies no need to do the kind of surveillance, discipline and behavioral training that is implied by and associated with the frame that young babies *can* deliberately manipulate their parents

[20] The first two topics are also interesting to explore in depth because they are the only two in the study where there are sizeable cross-group differences in exposure to the frames, half of which are much more familiar to less privileged women, and half of which are much more familiar among more privileged women. Most of the biggest variations in frame exposure in the rest of the survey derive from greater familiarity on the part of women with private insurance and high levels of education.

(Waggoner 2011).[21] In my fieldwork and interviews, this perspective was never formally represented by medical institutions or staff associated with them. However, I observed the frame implied in exchanges between women and their social contacts (friends, family) and occasionally by feminist care providers (medical practitioners, lactation consultants, prenatal instructors), who interpreted it as a facet of women's legitimate bodily autonomy.

In the sample, there were notable variations across groups in exposure to and opinion about these two frames. The majority of respondents in every category had heard that a woman should breast-feed even if she does not want to. These proportions varied significantly by insurance type (83% of Medi-Cal respondents versus 63% of private respondents) and marginally by race and ethnicity (Latinas 89% and African-American respondents 79%, as compared to White (66%) and Asian/Pacific Islander (59%) respondents). In multivariate regressions, women with Medi-Cal were nearly three times more likely to be familiar with the "compulsory" frame as were respondents with private insurance.

Exposure to the frame that breastfeeding is optional varies even more markedly, but this time in favor of more privileged respondents. The most extreme differences were seen across levels of education: less than one-third of those with up to a high school degree up to almost three-quarters of those with graduate degrees were familiar with the idea "that if a new mother does not want to breastfeed, that is a good enough reason for her not to." (Respondents with some college, at 39%, and those with a college degree, 54%, fell in between, and were significantly less likely to have heard this frame than were women with a graduate degree, even net of the full complement of controls.) A higher proportion of private patients (63%) were familiar with it than were public health insurance patients (39%), and familiarity was highest among White respondents (65%, versus 52% of Asian/Pacific Islanders, 47% of African-American, and 39% of Latinas). First-time mothers were also significantly less likely than experienced mothers to be familiar with this "optional" frame.

Considering side by side the patterns of exposure to the two frames, one can see that the differences were greatest among those with less education, those with Medi-Cal coverage, and those who are Latina and African-American. In the cases of Medi-Cal patients, the proportion that is familiar with the compulsory frame is more than double the proportion that is familiar with the optional frame. The same proportion of private insurance patients, however, is familiar with each of the frames (63%). A similar pattern is seen by level of education: among women with up to a high school education, the proportion that knows the compulsory frame is almost three times the proportion that knows the optional frame. The difference in exposure to the two frames is much smaller among women with college degrees (65% compulsory, 54% optional), and is in fact reversed among women with a college degree (65% compulsory, 74% optional). Finally, with regard to race/ethnicity, the difference in exposure to the two frames for White and Asian/Pacific Islander respondents was one to seven percentage points; whereas differences in exposure to the two frames by African-American respondents and Latina respondents were 32 and 50 percentage points, respectively. The experience of exposure to these frames is conditioned by class and race.

Women's opinions about breast-feeding as compulsory or optional broadly mirror the patterns of their exposure to these frames. In nearly every subgroup, the majority agrees with the frame that breast-feeding is compulsory. The difference in support for the compulsory frame versus the optional frame, though, is subtle—likely statistically indistinguishable—for certain

[21] In my interviews, the reasons respondents gave for not wanting to breastfeed, or the reasons they had heard from others, included anticipated pain, degradation of their breasts, and the perceived tastelessness or awkwardness of the practice.

subgroups: those with private insurance (ten points), graduate-level education (three points), White respondents (seven points) and Asian/Pacific Islander respondents (eight points). And, compared to their counterparts, these subgroups expressed the greatest support for the optional frame and the lowest support for the compulsory frame. Fewer than four in ten Asian/Pacific Islanders and White respondents agreed that breast-feeding is compulsory for new mothers, compared to six out of ten African-American respondents and 7.5 out of ten Latina respondents. Fewer than one-third of those with graduate degrees agreed with the compulsory frame, versus almost two-thirds of those with up to a high school degree. Fewer than four out of ten of those with private insurance agreed with the compulsory frame, whereas more than six out of ten of those with Medi-Cal coverage did. In multivariate regressions, Latinas were 3.2 times more likely than White respondents, and those with college degrees almost twice as likely as those with graduate degrees, to agree that new mothers should try to breastfeed even if they do not want to.

So the perception that breast-feeding is compulsory is much more supported among less privileged women and Latina and Black women. Net of the characteristics controlled in multivariate analyses, race and education emerged as the most significant predictors of agreement with this view.

In comparison, agreement with the optional frame is less robustly associated with social groupings; only race/ethnicity and insurance type were even marginally related based on chi-squared tests. These distributions are, however, informative. Fifty percent more women with private insurance (29%) than with Medicaid coverage (19%) support the idea that it is legitimate for a women not to breast-feed if she does not want to. Over twice the proportion of women with graduate degrees support this frame (35%) than do those with up to a high school degree (15%), and in multivariate regressions they are twice as likely to support it than even their counterparts with college degrees. Indeed, respondents with graduate degrees are the only subgroup in which more respondents support the optional frame than support the mandatory frame. Nearly one-third of White and Asian/Pacific Islander respondents support the optional frame, as compared to 15% of Black respondents and 11% of Hispanic respondents. Net of controls, Latinas were one-quarter is likely as White respondents to agree that if a new mother did not want to breast-feed that would be a good enough reason for her not to.

The "breast-feeding as optional" frame, then, is notably more present in the lives of more privileged women and White women, and more embraced in the lives of women with private insurance, White women and Asian/Pacific Islander women, than it is for their less privileged, Black and Latina counterparts. Indeed, considering the full range of women's possible responses about their opinion of this frame, one can see that the majority of Black and Latina respondents in fact reject the idea that maternal preference is a legitimate reason not to breast-feed (not shown).

Differences in exposure to the compulsory frame may reflect the high level of intervention and surveillance experienced by poor women and women of color, as vividly described in the ethnography by Khiara Bridges (2011) and echoed in my own observations. Women receiving publicly funded pregnancy and maternal care are regularly subject to the medical gaze via appointments with W.I.C. counselors, social workers, nutritionists, and prenatal care providers, many of which are a condition of their receipt of the coverage. Because of this, women with public insurance may be more likely than women with private insurance to encounter the official public health message that every mother should breastfeed her infant. But this explains—or potentially explains—only part of the pattern found here. The majority of these women in the study also *support* the compulsory frame. They, more than the highly-educated White women documented in so many texts on the ideologies of contemporary motherhood, are endorsing maternal self-

sacrifice in one of the most time-consuming and often challenging aspects of motherhood (Avishai 2007; Blum 1999; Bobel 2002; Hays 1996; Kelleher 2006).

In sum, these Black and Latina women, and women with less education and Medi-Cal coverage, are exposed to the idea that breast-feeding is compulsory much more than they are exposed to the idea that it could be optional. Moreover, they support the compulsory frame at notably higher rates than they do the optional frame, and at notably higher rates than do their more privileged, White and Asian/Pacific Islander counterparts. This indicates that the reason that women with low socio-economic status breast-feed at lower rates than their more privileged counterparts is not because they simply do not want to (Centers for Disease Control and Prevention 2013; McDowell, Wang and Kennedy-Stephenson 2008).[22] This presents a significant challenge to the public health campaigns that work on the level of trying to change the preferences of those at greatest risk of not breast-feeding.

ii. Evaluating Risk in Labor & Delivery (Table 7)

During fieldwork, two frames that I observed women use—typically implied in their expectations for their birth experiences—was of labor and delivery as either a high- or low-risk setting. I asked women in the survey whether they had heard (a) "that serious complications are *rare* in labor and delivery," and (b) "that serious complications are *common* in labor and delivery." Exposure to these ideas varied substantially by measured respondent characteristics. The frame that labor and delivery is the site of "common" serious complications was more familiar to less privileged women and women of color than it was to their more privileged counterparts and White women. Sixty percent of those with up to high school degree and 58% of those with Medi-Cal coverage had heard the common frame, versus 26% of those with private insurance and 26% - 29% of those with college or graduate degrees. Approximately half of African-Americans and Asian/Pacific Islanders, and two thirds of Latinas, had been exposed to the common frame as compared to one-quarter of White women. Multivariate regressions revealed that respondents with Medi-Cal were over 3.5 times more likely to be familiar with the common frame than were respondents with private insurance, and Latinas 2.5 times more likely than White respondents.

Conversely, the group most familiar with the idea that serious complications in labor and delivery are "rare" were White women (70%), Latinas (53%), and at approximately half the rate of White women, African-Americans (38%) and Asian/Pacific Islanders (34%). In multivariate regressions, Asian women were significantly different than White women, at less than one third the likelihood of being familiar with the rare frame. Familiarity with this idea had a robust relationship with respondents' educational achievement in both bivariate and multivariate analyses. Approximately one-quarter of women with up to a high school education, a little over one-third of those with some college education, two-thirds of those with a college degree, and three-quarters of those with graduate degrees, were familiar with the idea that serious complications were rare in labor and delivery. Even controlling for other factors in the model, women with the lowest levels of education were 12% and 19% as likely as women with graduate degrees to have heard this frame. In the distributions we also see a far higher proportion of patients with private insurance (73%) than among women with Medi-Cal (42%).

So merely looking at exposure to this idea—not even respondents' assessments of it—one can see sizable differences based on respondent's race/ethnicity, education and insurance type,

[22] Note that McDowell et al (2008) found that non-Hispanic White and non-Hispanic Black infants from high-income families were both significantly more likely to have ever breastfed than were infants from low-income families; this pattern was not found for by Mexican-American infants.

with the most privileged women more exposed to the frame that serious complications in labor and delivery are rare, and less privileged women more exposed to the idea that they are common.

Opinions about these frames map closely onto exposure. Over one-third of respondents with Medi-Cal coverage agree that labor and delivery is "commonly" risky versus four percent of those with private insurance. Similarly small proportions of women with graduate college degrees (3% and 6%) and White women (3%) agree with this frame, as compared to one-quarter or less of those with the lowest two levels of education (18-25%) and African-American women (25%), and approximately one-third of Latinas (31%) and Asian/Pacific Islanders (34%). In the regression model, Asian/Pacific Islanders were almost 11 times more likely than White women to agree that serious complications are common in labor and delivery. White women, on the other hand, were the group most likely to agree with the frame that complications were rare: almost six out of ten versus four, three, and two out of ten, respectively, among Latinas, African-Americans and Asian/Pacific Islanders. Asian/Pacific Islander women were one-fifth as likely as White women in multivariate regressions to agree. Education strongly tracked with agreement with this frame in both bivariate and multivariate analyses. Two-thirds of those with graduate degrees agreed with the rare frame versus 43%, 33%, and 20% of those with lower levels of education, respectively. Finally, twice as many respondents with private insurance (59%) agreed that serious complications were rare as did those with Medi-Cal coverage (28%).

These findings echo data from the most recent Listening to Mothers survey (Declercq et al. 2013a).[23] Study authors found that non-Hispanic White mothers in the U.S. were less likely than non-Hispanic Black or Hispanic mothers to be "concerned about a serious medical error in a hospital." These non-Hispanic White women were also more likely than their counterparts to rate the "overall quality of health care in the United States as 'excellent' or 'good'" (p. xvi).

Similarly, studies from public health and sociology shows that poor women and some women of color likely have more reason for concern about complications in the hospital. These groups have a higher risk of gestational diabetes, preterm birth, and limited or insufficient prenatal care, all of which can complicate labor and delivery (Caughey et al. 2010; Declercq and Chalmers 2008; Declercq, Barger and Weiss 2011; Mocarski and Savitz 2012; Roth and Henley 2012). Additionally, research has shown that women of color and poor women receive less evidence-based maternal care and care of poorer quality than do White and more privileged women (Roth and Henley 2012). Indeed, pregnant women of color in the United States, especially African-American women, have a significantly greater risk of morbidity and mortality than do White women (Amnesty International 2010; Roth and Henley 2012; Sung et al. 1994). Some scholars believe this is due to the perinatal events these groups experience, such as higher rates of medical interventions and complications in labor and delivery (Roth and Henley 2012). Even after controlling for numerous other factors, for example, Black women are significantly more likely to undergo a cesarean section than are White women (Behar 2013; Roth and Henley 2012).

iii. Evaluating the use of Epidural Analgesia (Table 6)

The last "spotlight" analysis focuses on epidural analgesia use, a practice that is employed by the majority of pregnant women in the United States (Declercq and Chalmers 2008; Declercq, Barger and Weiss 2011; Declercq et al. 2013b). Epidural use is the target of some scholarly controversy regarding its effects on the likelihood of cesarean section and is also the subject of arguably moral debates among women in some communities regarding its appropriateness and

[23] LTM III collected post-partum survey data from 2400 women who had given birth to a single baby in a hospital between July 2011 and June 2012.

desirability for normal vaginal deliveries (Anim-Somuah, Smyth and Jones 2011; Bobel 2002; Brubaker and Dillaway 2008; Dillaway and Brubaker 2006; Moyer 2012; Wolf 2009).

The CH survey asked respondents whether they were familiar with the idea that, all in all, epidurals are "good" or "bad" for women in labor. Across groups, differences in exposure to the idea that epidural use was "good" was subtle enough that chi-squared tests detected no statistically significant relationships between it and race, education or insurance type. The multivariate model predicting exposure to this frame was not sound, due probably to this low variability. This in itself is interesting: between one-half and two-thirds of respondents across categories of race/ethnicity, educational achievement and insurance type have heard that epidurals are good for women in labor.

There is more variation in exposure to the idea that epidural use is "bad," with statistically significant relationships across all three variable groups. Nearly two-thirds of White women versus between one-third and one-half of Latinas (47%), Asian/Pacific Islanders (38%) and African-American women (32%) were exposed to this idea. Moreover, more than twice as many women with private insurance (71%) were familiar with the "bad" frame than were women with Medi-Cal coverage (32%), who in multivariate regressions had just over one-fifth the likelihood of being familiar with it.

There were also notable differences by education level, with smaller proportions of women with low levels of education reporting familiarity with this frame than among women with graduate degrees. This relationship held up in multivariate regression as well, showing that, net of controls, women with some college education and college degrees had a likelihood that was one-quarter and one-half, respectively, that of women with the highest level of education. (Significant differences by race/ethnicity were not observed in multivariate regressions.)

Some of the cross-group variations in exposure to the “good” and “bad” frames mirror patterns of agreement, while others do not. Three times as many women with private insurance agreed that epidural use was in general "bad" for women than did those with Medi-Cal coverage. The level of agreement with the “bad” frame among White women, and those with college and graduate degrees, was almost twice the level of their counterparts, though these were not sizable enough differences to reach statistical significance in bivariate tests. (For agreement with epidural use being "bad," only a control variable reached statistical significance.) Departing from the similar levels of *exposure* to the “good” frame, twice as many of those with Medi-Cal agreed that epidural use was good for women than did those with private insurance coverage. The multivariate regression for agreeing with the "good" frame was not robust, however, possibly because of insufficient variation.

Overall, these data paint the picture that the majority of women across categories are exposed to the idea that epidurals are good for pregnant women, and that less privileged women are more likely to agree with that frame than are their more privileged counterparts. Privileged and White women are more exposed to the frame that epidural use is "bad" for birthing women, and they agree with this frame at notably higher rates than do their counterparts.

These patterns at least partly echo popular and scholarly treatments of epidural use that locate suspicion of the effects and the defensibility of epidural use among upper-middle-class women who have the time, resources and social incentives to focus on these issues (e.g., Bobel 2002; Wolf 2009). I observed this in the accompanying longitudinal interviews as well. The vast majority of upper-middle-class respondents told me that they wished to avoid epidural use for several reasons, many of which concerned it putting them at greater risk for other (undesired)

medical interventions.[24] Some low-income respondents cited concerns that epidural use could lead to back injury or paralysis,[25] but very few described epidural use as an issue that required much attention or as an issue with potentially negative implications for the trajectory of their birth or their child's well-being. Recent research at a hospital in the same region as this study, however, found that Hispanic women, Spanish-speaking women, women who had not finished high school, and women with Medi-Cal coverage used epidurals at significantly lower rates than did White and more privileged women (Harkins et al. 2010).

One additional observation about these patterns is worth mentioning. In most cases, the data presented in this "Spotlight" section suggest that patterns of exposure roughly parallel patterns of endorsement. That is, in most cases groups that are familiar with a frame at a higher rate than another group also agree with it at a higher rate. Those relationships held true as shown in the first two spotlight analyses. This epidural frame analysis, however, shows a different pattern. Approximately twice as many women with Medi-Cal coverage as with private coverage agree or strongly agree that epidurals are good for women in labor, but roughly the same proportion of the two groups were exposed to the frame.[26] There are other examples that follow this pattern as well. For example, regarding the instrumental view of pregnancy, 19% of Medi-Cal respondents and 42% private respondents were familiar with it, but 15% of the Medi-Cal group and 6% of the private group agreed with it. Similarly, for the frame that drinking is "never okay," 72% of women on Medi-Cal and 90% of those with private insurance had heard of it, but 63% of those with Medi-Cal and 23% of those with private coverage agreed with it. Individuals' opinions about cultural frames do not necessarily mirror patterns of exposure.

C. Exposure to Contradictory Ideas

One common theme running through popular "mommy literature," online discussion groups and the prenatal care groups I observed during fieldwork was the experience of "information overload" (e.g., Warner 2005). As represented in these contexts, this overload is always in reference to an assortment of information and perspectives to consider. It does not appear to describe an abundance of consistent information, which none of my respondents found troubling.[27] There is little scholarly investigation of pregnant women's encounters with or navigation of such opposing advice, "facts," and viewpoints.

Here I use the data from the cultural heterogeneity measure to investigate this phenomenon. Do the data support the idea that exposure to contradictory information is a common feature of anticipated and new motherhood? Is it limited to some individuals, such as the upper-middle-class women writing and reading so much of the "mommy lit" that features this experience? Here I

[24] These respondents described concerns about the epidural affecting infants' ability to breast-feed upon birth, as well as the risk that epidural use could be the factor that sets off a "cascade" of medical birth interventions that they wished to avoid. Some also embraced the challenge of unmedicated birth, seeing it as an important rite of passage in experiencing the journey toward motherhood.

[25] This is similar to a pattern Dillaway and Brubaker (2006) found among working-class, teenage, African American pregnant women in the South.

[26] 54% of those with Medi-Cal and 64% of those with private insurance were familiar with the frame that epidurals were good for women. The difference was not statistically significant based on the chi-squared test performed.

[27] An example of exposure to an abundance of consistent frames could be hearing the frames that breastfeeding is important because it is good for the baby; that it is important because it is good for the mother's future health; and that it is important because it helps the mother and baby bond. The frames are consonant in that they recommend and/or justify the same course of action.

consider patterns for the individual "spotlight" topics and then for the set of all CH topics, together.

Regarding perspectives on labor and delivery, exposure to both the frame that serious complications during labor and delivery are rare and that they are common is spread evenly across groups at about one out of five individuals (Table 7). In the multivariate logistic regression that predicts respondents' exposure to both frames, respondents with graduate degrees are five to ten times more likely than respondents with some college or less to know both, and Latinas are almost four times more likely than White respondents.

Exposure to both ideas about epidural use—that they are good for women in labor and bad for women in labor—varies meaningfully across categories (Table 6). One-half of respondents with private insurance are familiar with both, versus one-fifth of those on Medi-Cal. Nearly one-half of White respondents are exposed to both versus approximately three out of ten Latinas and Asian/Pacific Islanders, and one out of six Black respondents. Driving most of this, based on multivariate regression results, are differences by level of education, wherein a higher proportion of those with graduate degrees (54%) than those with up to a high school degree (26%) and especially those with some college (12%) are familiar with both epidural frames.

Considering the compulsory or optional nature of breast-feeding, there were no statistically significant relationships between exposure to both frames and race/ethnicity, education or insurance status (Table 11). Moreover, the multivariate regression model predicting exposure to both was not robust. Between one-quarter and one-half of every subgroup was exposed to both frames in this topic set.

Finally, I created a count of the number of individual topics about which the respondent knows more than one—therefore at least two—contradictory statements or frames. Sample-wide, respondents knew contradictory statements for an average of 4.85 of the 12 topics (Table 15). This figure varied significantly, though, across race/ethnicity, education and insurance type. Respondents with private insurance (5.4) were exposed to more contradictory frames than those with public coverage (4). White (5.3) and Latina (4.8) respondents were familiar with a greater variety of contradictory frames than were Black (3.6) and Asian/Pacific Islander (4) respondents. The most dramatic spread was across levels of education, with those with a graduate degree (5.8) and college degree (4.9) having been exposed to contradictory ideas about significantly more topics than had those with a high school degree or less (3.8) or those with some college (3.5). Negative binomial regression shows that—net of educational achievement, race/ethnicity, insurance type and controls—respondents with graduate degrees were familiar with a significantly higher average number of contradictory frames than were those with some college and, marginally, than those with college degrees (not shown). White respondents had a marginally higher average than did Asian/Pacific islander respondents in this model.

Taken together, these analyses indicate that exposure varies by education, and to a lesser extent by race/ethnicity and insurance type. Exposure to contradictory ideas or frames indeed is more common among highly educated, privileged White women as portrayed in (and written by) popular "mommy lit" authors.[28] But it is also nearly as common among Latina respondents, almost all of whom in this study received Medi-Cal health coverage.[29] Moreover, it is important to highlight that no group's average exposure to contradictory frames reaches even one-half of the

[28] This is perhaps due to their more diverse networks and greater exposure through education and information consumption, as explained in Garrett 2013b.

[29] As one-half of the Latinas in this study spoke Spanish as their primary language, this may reflect their personal experience – or experience of those in their networks – with maternal care systems in other (Spanish-speaking) countries as well as in the United States.

topics studied, and that—despite the statistical significance of the variations within the race/ethnicity-, insurance-, and education-based groupings—the differences between the subgroups are modest. The average number of topics in which respondents with private insurance and White respondents knew multiple frames was 50% higher than that of public coverage or Black respondents; the average for respondents with graduate degrees was 65% higher than the average for respondents with some college. Exposure to contradictory ideas is a feature of every woman's landscape, but is modestly greater for certain subgroups.

DISCUSSION

This study draws on original survey data from a racially- and socioeconomically-diverse sample of women to explore the cultural landscape of contemporary pregnant women. From analyses in Section A, one can see that the cultural terrains of women with public and private insurance share many features, though they differ in measurable ways as well. Some ideas, like pregnancy as inherently valuable and breast milk as superior to formula, are virtually universally known. Other frames that were less well known were still familiar to similar proportions of the focal groups (i.e., women with public and private insurance coverage). Frames such as genetics being the greatest influence on the health of unborn babies or that pregnant women should decrease their level of physical activity, for example, represent similarly prominent characteristics in the landscapes of these two groups.

The way in which the landscapes of these two groups differed created a cultural terrain for women with private insurance that is more balanced between demanding and flexible practices, and more positive, reassuring and cynical, than is that of women with public health-care coverage. More research is needed to learn whether these differences arise from women's own experiences of occupying different social locations, from messages that women encounter in the different institutions with which they interact, or both.

Analyses in Section B provided an in-depth look at three spotlight issues: perception of risk in labor and delivery, the effects of epidural use, and the optional or compulsory nature of breast-feeding. These showed the complexity of variations in exposure and endorsement of cultural ideas across several subgroups (race/ethnicity, educational achievement, insurance type). These revealed that, although race and ethnic differences do track with "cultural differences"—here, differences in exposure to and feelings about cultural frames—it does not do so reliably, nor does membership in a particular racial or ethnic group, of course, explain these cultural differences. I argue that differences in exposure to, endorsement of, and use of cultural resources are the mechanisms underlying "cultural differences" in health behaviors and outcomes. Here also, analyses revealed the variable relationship between patterns of exposure to cultural frames and patterns of endorsement of them.

Analyses from Section C showed that exposure to contradictory ideas is commonplace for contemporary pregnant women. This is especially true for more privileged women, as has been extensively discussed in popular "mommy lit" (Warner 2005). Importantly, however, concerns about such "information overload" is not reserved to the upper middle class. Latina respondents had rates that approached those of White respondents, and pregnant women of every race, education level and insurance type are faced with discordant ideas, facts and advice about self-care, birth care and parenting.

This insight, together with the observation that patterns of endorsement do not always mirror patterns of exposure, highlights the inadequacies of measuring only individuals'

preferences, as is primarily done in research on perspectives of pregnant women and research on patients more broadly. For cognitive consonance, individuals typically avoid agreeing with ideas that contradict one another (Festinger 1957). Opinion data on their own, then, tell scholars very little about individuals' exposure to opposed ideas. Consider the case of investigating what women think about using epidural analgesia for their upcoming births. If they are asked only to respond about on how much they want an epidural (e.g., strongly disagree through strongly agree), the woman who has only heard from her social world that epidurals are good could look identical to a person who has heard both that epidurals are good for women and that they are bad for women. However, these women may approach quite differently their decision-making and use (or not) of analgesia during labor and delivery. Compared to the person who is familiar with only one frame, the person who has heard both, no matter what she thinks about them, knows that there is debate about this practice and knows that, at least for some people, there is a moral valence to it.

This multiplicity of perspectives is not necessarily negative; familiarity with such a variety of perspectives can enable individuals to adeptly "read" different scenes and interactions, or to symbolically frame (or reframe) an event or outcome that went differently than planned (Goffman 1974; Swidler 1986; Swidler 2001). Analyses presented in Paper 3, however, suggest that exposure to such contradictory ideas may be emotionally taxing (Garrett 2013c). And, importantly, a study based exclusively on such preference reporting will reveal little about what these women actually "think" about epidural analgesia use.

This study is limited in several regards. It measures exposure to and endorsement of a mere 29 frames out of the multiplicity that pregnant women may encounter. Additionally, there was too little data on women with select characteristics (e.g., those who self-reported as multi-ethnic or other) to make claims about the features of their cultural landscape. Related to this, my sample cannot be generalized to women in the U.S. in general, nor even to the patient populations at the institutions where they received care. And, of course, the data presented here can only represent the ways in which women categorized their perspectives on surveys. They are not as nuanced as in-depth interview data would be; they cannot reveal, for example, the salience of topics to the respondents, or provide more nuance to concepts of familiarity or agreement/disagreement than I have categories for. Nonetheless, these data advance scholarly understandings of the cultural landscapes of pregnant women in the U.S., and how they differ across groups. I submit that the cross-group analyses allowed by quantitative data collection at least partly make up for the lack of nuanced self-description and meaning-making that would have been revealed in qualitative data.

Conclusion

By collecting original multidimensional data on the ideas pregnant women encounter, and doing so from a group of meaningfully diverse respondents, this study responds to calls for more and better research on pregnant women's views (Brubaker and Dillaway 2009; Campbell, Stanford and Ewigman 1996; Club Mom/Greenberg Quinlan Rosner Research 2004, 2005; Green 2012) and on the interaction of culture and health (Dressler 2012; Green 2012; Kagawa Singer 2012; Unger and Schwartz 2012). Insights from these data can advance investigations into, for example, the pernicious inequalities that plague maternal care and outcomes (Declercq, Barger and Weiss 2011), and the best ways to reach new national goals of better patient-provider communication and shared decision-making in maternity care (Sakala 2012). Despite its limitations, this study represents a significant step forward in illuminating the rich and complex landscapes of contemporary pregnancy. Moreover, the study demonstrates one way of measuring exposure to and opinion about cultural frames—the building blocks of individuals' perspectives. This

instrument can easily be modified to fit other empirical settings and populations. This study also presents an alternative to, and shows the inadequacy of, using race and other proxies for culture as is widely done in health research.

The benefits of collecting and analyzing novel data like this are empirical, methodological, and theoretical. Generating richer and more complete representations of this important life stage is itself a goal. Additionally, it can result in both more informed medical care and more nuanced understandings of existing research.

Tables for Chapter 1

Table 1. Sample Descriptives (n = 287)

	%	n
Total	100.00	287
Race/ethnicity		
Asian/Pacific Islander	10.1%	29
Black	11.9%	34
Latina/Hispanic	12.5%	36
Native American	0.0%	0
White	54.0%	155
Multi-ethnic	3.5%	10
Other	2.8%	8
Declined	0.4%	1
Missing	4.9%	14
Educational achievement		
High school or less	7.0%	20
Some college	14.3%	41
Completed college	22.7%	65
Completed grad. school	35.5%	102
Missing	20.6%	59
Insurance type		
Medi-Cal	41.1%	118
Private	43.2%	124
Missing	15.7%	45

Table 2. Frames about exercise during pregnancy

	Exposure					Opinion		
	% that has heard…			In this series, % that has heard…		% that agrees with…		
	#1: Less	#2: Maintain	#3: More	At least 1 item	More than 1 item	#1	#2	#3
Overall sample	0.56	0.41	0.84	0.95	0.68	0.15	0.29	0.70
N	287	287	286	286	286	275	282	283
Race/Ethnicity		*	*		*	*	*	*
Asian/Pac. Islander	0.55	0.41	0.86	0.97	0.76	0.24	0.28	0.55
Black	0.44	0.41	0.62	0.94	0.47	0.19	0.35	0.59
Latina/Hispanic	0.56	0.69	0.81	0.92	0.78	0.24	0.56	0.57
White	0.59	0.32	0.91	0.95	0.70	0.08	0.20	0.78
Multi-ethnic	0.70	0.20	0.56	0.89	0.33	0.22	0.20	0.60
Other	0.50	0.63	0.88	1.00	0.75	0.00	0.38	0.63
Declined	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Missing	0.50	0.57	0.86	1.00	0.71	0.42	0.45	0.92
Education		*				*	*	
Up to HS degree	0.50	0.65	0.85	1.00	0.75	0.17	0.50	0.68
Some college	0.49	0.44	0.78	0.90	0.59	0.27	0.38	0.70
College degree	0.62	0.29	0.86	0.98	0.66	0.09	0.20	0.69
Graduate degree	0.59	0.33	0.90	0.94	0.69	0.09	0.21	0.77
Missing	0.53	0.56	0.75	0.95	0.71	0.26	0.41	0.60
Insurance type		*	*			*	*	*
Medi-Cal	0.50	0.50	0.73	0.93	0.64	0.25	0.39	0.58
Private	0.58	0.32	0.92	0.97	0.69	0.11	0.22	0.80
Missing	0.67	0.40	0.91	0.96	0.76	0.04	0.22	0.76

* Stastistically significant at the 0.05 level.

+ Statistically significant at the 0.10 level.

Note. Full text of frames: 1. That women should become less physically active while they are pregnant. 2. That women should maintain their normal level of physical activity while they are pregnant. 3. That women should become more physically active while they are pregnant

Table 3. Frames about the primary factor that affects the unborn baby's health

	Exposure					Opinion		
	% that has heard…			In this series, % that has heard…		% that agrees with…		
	#1: God	#2: Genetics	#3: Mom	At least 1 item	More than 1 item	#1	#2	#3
Overall sample	0.35	0.35	0.65	0.80	0.43	0.15	0.19	0.46
N	287	285	286	284	284	280	274	284
Race/Ethnicity	*			*	*	*		*
Asian/Pac. Islander	0.17	0.29	0.62	0.71	0.29	0.07	0.11	0.62
Black	0.41	0.35	0.76	0.91	0.50	0.39	0.21	0.76
Latina/Hispanic	0.69	0.44	0.80	1.00	0.71	0.39	0.23	0.67
White	0.27	0.35	0.59	0.74	0.37	0.03	0.18	0.33
Multi-ethnic	0.50	0.10	0.60	0.80	0.40	0.30	0.10	0.30
Other	0.25	0.38	0.75	0.75	0.50	0.29	0.14	0.43
Declined	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00
Missing	0.50	0.43	0.71	0.93	0.50	0.33	0.45	0.46
Education				+		*		*
Up to HS degree	0.50	0.25	0.70	0.85	0.50	0.37	0.18	0.74
Some college	0.29	0.33	0.70	0.92	0.38	0.21	0.28	0.68
College degree	0.25	0.37	0.51	0.71	0.34	0.09	0.19	0.34
Graduate degree	0.30	0.34	0.65	0.74	0.43	0.02	0.16	0.30
Missing	0.53	0.41	0.78	0.92	0.54	0.35	0.19	0.64
Insurance type	*		*	*	*	*		*
Medi-Cal	0.46	0.36	0.75	0.89	0.52	0.32	0.22	0.66
Private	0.27	0.34	0.59	0.73	0.38	0.02	0.16	0.36
Missing	0.27	0.36	0.58	0.78	0.33	0.09	0.20	0.25

* Stastistically significant at the 0.05 level.

+ Statistically significant at the 0.10 level.

Note. Full text of frames: 1. That an unborn baby's health depends on God more than anything else. 2. That an unborn baby's health depends on genetics more than anything else. 3. That an unborn baby's health depends on the mother's actions more than anything else.

Table 4. Frames about pregnancy as inherently valuable or instrumentally valuable

	Exposure				Opinion	
	% that has heard…		In this set, % that has heard…		% that agrees with…	
	#1 Inherent	#2 Instrumental	At least 1 item	More than 1 item	#1	#2
Overall sample	0.99	0.33	0.997	0.32	0.76	0.09
N	287	287	287	287	278	284
Race/Ethnicity				+		*
Asian/Pac. Islander	1.00	0.24	1.00	0.24	0.79	0.04
Black	0.97	0.18	1.00	0.15	0.76	0.12
Latina/Hispanic	0.97	0.22	0.97	0.22	0.91	0.11
White	1.00	0.39	1.00	0.39	0.70	0.05
Multi-ethnic	1.00	0.40	1.00	0.40	0.70	0.10
Other	1.00	0.25	1.00	0.25	0.86	0.38
Declined	1.00	0.00	1.00	0.00	1.00	0.00
Missing	1.00	0.43	1.00	0.43	0.86	0.29
Education		*		*		
Up to HS degree	1.00	0.15	1.00	0.15	0.83	0.05
Some college	1.00	0.17	1.00	0.17	0.80	0.12
College degree	1.00	0.32	1.00	0.32	0.76	0.02
Graduate degree	1.00	0.47	1.00	0.47	0.67	0.07
Missing	0.98	0.25	0.98	0.24	0.85	0.19
Insurance type		*		*	*	*
Medi-Cal	0.98	0.19	0.99	0.18	0.85	0.15
Private	1.00	0.42	1.00	0.42	0.69	0.06
Missing	1.00	0.44	1.00	0.44	0.71	0.02

* Stastistically significant at the 0.05 level.

+ Statistically significant at the 0.10 level.

Note. Full text of frames: 1. That pregnancy itself is a great experience. 2. That there is nothing great about pregnancy except for the baby

Table 5. Frames about occasional alcohol consumption during pregnancy

	Exposure					Opinion		
	% that has heard…			In this series, % that has heard…		% that agrees with…		
	#1: It's OK	#2: It's good	#3: Never OK	At least 1 item	More than 1 item	#1	#2	#3
Overall sample	0.81	0.35	0.81	0.96	0.74	0.15	0.19	0.46
N	287	285	287	285	285	280	274	284
Race/Ethnicity	*	+			*	*		*
Asian/Pac. Islander	0.66	0.24	0.83	0.97	0.66	0.17	0.07	0.52
Black	0.71	0.41	0.68	0.94	0.59	0.00	0.09	0.71
Latina/Hispanic	0.69	0.50	0.78	0.94	0.64	0.15	0.09	0.60
White	0.90	0.30	0.85	0.98	0.81	0.47	0.06	0.21
Multi-ethnic	0.90	0.30	0.80	1.00	0.90	0.30	0.00	0.50
Other	0.75	0.63	0.88	1.00	0.75	0.25	0.00	0.71
Declined	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00
Missing	0.71	0.46	0.64	0.85	0.62	0.08	0.07	0.36
Education	*		*	*	*	*		*
Up to HS degree	0.80	0.50	0.65	0.90	0.65	0.11	0.05	0.50
Some college	0.56	0.34	0.76	0.98	0.51	0.15	0.13	0.61
College degree	0.89	0.34	0.82	0.98	0.82	0.48	0.06	0.32
Graduate degree	0.92	0.29	0.91	1.00	0.84	0.47	0.04	0.20
Missing	0.71	0.43	0.71	0.90	0.67	0.04	0.07	0.57
Insurance type	*	*	*	*	*	*		*
Medi-Cal	0.67	0.42	0.72	0.92	0.60	0.07	0.09	0.63
Private	0.89	0.28	0.90	0.99	0.84	0.50	0.04	0.23
Missing	0.98	0.36	0.80	1.00	0.84	0.44	0.07	0.16

* Stastistically significant at the 0.05 level.

+ Statistically significant at the 0.10 level.

Note. Full text of frames: 1. That it is OK for a pregnant woman to drink a glass of wine or beer every now and then. 2. That it is good for a pregnant woman to drink a glass of wine or beer every now and then. 3. That it is never OK for a pregnant woman to drink a glass of wine or beer

Table 6. Frames about epidural analgesia as good or bad for women in labor

	Exposure				Opinion	
	% that has heard…		In this set, % that has heard…		% that agrees with…	
	#1: Good	#2: Bad	At least 1 item	More than 1 item	#1	#2
Overall sample	0.60	0.53	0.76	0.35	0.15	0.22
N	284	285	283	283	274	276
Race/Ethnicity		*		*		
Asian/Pac. Islander	0.69	0.38	0.79	0.28	0.25	0.14
Black	0.50	0.32	0.68	0.15	0.18	0.15
Latina/Hispanic	0.59	0.47	0.73	0.30	0.17	0.10
White	0.63	0.65	0.81	0.46	0.13	0.29
Multi-ethnic	0.50	0.60	0.80	0.30	0.10	0.10
Other	0.57	0.63	0.86	0.29	0.00	0.29
Declined	1.00	0.00	1.00	0.00	0.00	0.00
Missing	0.36	0.00	0.36	0.00	0.25	0.08
Education		*	*	*		+
Up to HS degree	0.47	0.40	0.58	0.26	0.13	0.17
Some college	0.61	0.24	0.73	0.12	0.20	0.11
College degree	0.58	0.57	0.80	0.35	0.14	0.27
Graduate degree	0.66	0.75	0.86	0.54	0.09	0.30
Missing	0.53	0.33	0.63	0.21	0.27	0.09
Insurance type		*	*	*	*	*
Medi-Cal	0.54	0.32	0.65	0.19	0.21	0.10
Private	0.64	0.71	0.85	0.50	0.10	0.32
Missing	0.62	0.56	0.82	0.36	0.18	0.23

* Stastistically significant at the 0.05 level.

+ Statistically significant at the 0.10 level.

Note. Full text of frames: 1. That, all in all, epidurals are good for women in labor. 2. That, all in all, epidurals are bad for women in labor.

Table 7. Frames about the risk of serious complications in labor and delivery

	Exposure				Opinion	
	% that has heard…		In this set, % that has heard…		% that agrees with…	
	#1: Common	#2: Rare	At least 1 item	More than 1 item	#1	#2
Overall sample	0.39	0.59	0.77	0.22	0.15	0.46
N	287	287	287	287	280	283
Race/Ethnicity	*	*		*	*	*
Asian/Pac. Islander	0.48	0.34	0.76	0.07	0.34	0.21
Black	0.44	0.38	0.71	0.12	0.25	0.29
Latina/Hispanic	0.67	0.53	0.78	0.42	0.31	0.39
White	0.26	0.70	0.76	0.19	0.03	0.58
Multi-ethnic	0.30	0.40	0.60	0.10	0.10	0.33
Other	0.75	0.88	1.00	0.63	0.38	0.25
Declined	1.00	0.00	1.00	0.00	1.00	.
Missing	0.71	0.57	0.93	0.36	0.38	0.36
Education	*	*	+		*	*
Up to HS degree	0.60	0.25	0.65	0.20	0.25	0.20
Some college	0.37	0.37	0.66	0.07	0.18	0.33
College degree	0.26	0.65	0.71	0.20	0.06	0.43
Graduate degree	0.29	0.76	0.82	0.24	0.03	0.67
Missing	0.66	0.49	0.85	0.31	0.43	0.29
Insurance type	*	*			*	*
Medi-Cal	0.58	0.42	0.76	0.25	0.34	0.28
Private	0.26	0.73	0.79	0.20	0.04	0.59
Missing	0.27	0.62	0.71	0.18	0.00	0.53

* Stastistically significant at the 0.05 level.

+ Statistically significant at the 0.10 level.

Note. Full text of frames: 1. That it is common for women to have serious complications during labor and delivery. 2. That it is rare for women to have serious complications during labor and delivery.

Table 8. Frames about the value of breastmilk versus formula for infants

	Exposure					Opinion		
	% that has heard…			In this series, % that has heard…		% that agrees with…		
	#1: BM & F equal	#2: BM better	#3: F better	At least 1 item	More than 1 item	#1	#2	#3
Overall sample	0.39	1.00	0.09	1.00	0.41	0.07	0.92	0.03
N	287	286	287	286	286	277	283	285
Race/Ethnicity			*		+		*	
Asian/Pac. Islander	0.34	1.00	0.07	1.00	0.39	0.07	0.76	0.00
Black	0.29	1.00	0.03	1.00	0.29	0.12	0.88	0.03
Latina/Hispanic	0.33	0.97	0.19	1.00	0.39	0.06	0.97	0.06
White	0.37	1.00	0.07	1.00	0.39	0.03	0.95	0.01
Multi-ethnic	0.60	1.00	0.20	1.00	0.70	0.11	0.90	0.10
Other	0.75	1.00	0.13	1.00	0.75	0.14	1.00	0.00
Declined	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00
Missing	0.64	1.00	0.07	1.00	0.64	0.46	0.85	0.14
Education						*		
Up to HS degree	0.30	1.00	0.00	1.00	0.30	0.05	0.95	0.05
Some college	0.27	1.00	0.05	1.00	0.29	0.15	0.88	0.02
College degree	0.40	1.00	0.08	1.00	0.43	0.00	0.95	0.02
Graduate degree	0.40	1.00	0.08	1.00	0.41	0.02	0.95	0.01
Missing	0.47	0.98	0.19	1.00	0.52	0.20	0.84	0.07
Insurance type						*	*	*
Medi-Cal	0.41	0.99	0.11	1.00	0.43	0.15	0.87	0.05
Private	0.36	1.00	0.07	1.00	0.38	0.02	0.96	0.01
Missing	0.42	1.00	0.09	1.00	0.47	0.02	0.93	0.02

* Stastistically significant at the 0.05 level.

+ Statistically significant at the 0.10 level.

Note. Full text of frames: 1. That breastmilk and formula are equally good for infants. 2. That breastmilk is better than formula for infants. 3. That formula is better than breastmilk for infants.

Table 9. Frames about the acceptability of nursing boy vs. girl babies

	Exposure					Opinion		
	% that has heard…			In this series, % that has heard…		% that agrees with…		
	#1: Boy more accept-able	#2: Girl more accept-able	#3: Equal-ly accept-able	At least 1 item	More than 1 item	#1	#2	#3
Overall sample	0.03	0.03	0.70	0.71	0.03	0.03	0.03	0.93
N	287	286	286	285	285	278	277	285
Race/Ethnicity	*	*	*	*	+			
Asian/P. Islander	0.07	0.11	0.79	0.79	0.11	0.00	0.00	0.93
Black	0.03	0.00	0.79	0.79	0.03	0.06	0.00	0.91
Latina/Hispanic	0.06	0.08	0.78	0.81	0.06	0.03	0.06	0.94
White	0.01	0.01	0.62	0.63	0.01	0.01	0.01	0.95
Multi-ethnic	0.00	0.00	0.70	0.70	0.00	0.00	0.00	0.90
Other	0.13	0.13	1.00	1.00	0.13	0.00	0.00	0.88
Declined	1.00	0.00	.	.	.	0.00	0.00	.
Missing	0.00	0.00	0.79	0.79	0.00	0.17	0.23	0.79
Education	*	*		+	*	*	+	+
Up to HS degree	0.10	0.15	0.75	0.85	0.10	0.06	0.06	0.90
Some college	0.05	0.02	0.80	0.80	0.05	0.05	0.03	0.88
College degree	0.00	0.00	0.68	0.68	0.00	0.00	0.00	0.97
Graduate degree	0.01	0.01	0.60	0.61	0.01	0.00	0.00	0.97
Missing	0.07	0.07	0.81	0.81	0.07	0.07	0.09	0.86
Insurance type	*	*	*	*	*	*	*	*
Medi-Cal	0.07	0.07	0.79	0.81	0.07	0.06	0.06	0.88
Private	0.01	0.01	0.64	0.65	0.01	0.00	0.00	0.97
Missing	0.00	0.00	0.62	0.62	0.00	0.00	0.00	0.96

* Stastistically significant at the 0.05 level.

+ Statistically significant at the 0.10 level.

Note. Full text of frames: 1. That it is more acceptable to nurse a boy baby than a girl baby. 2. That it is more acceptable to nurse a girl baby than a boy baby. 3. That it is equally acceptable to nurse girl and boy babies.

Table 10. Frames about the timing of baby-feeding

	Exposure				Opinion	
	% that has heard…		In this set, % that has heard…		% that agrees with…	
	#1: Set	#2: Flexible	At least 1 item	More than 1 item	#1	#2
Overall sample	0.84	0.91	0.98	0.76	0.26	0.72
N	286	287	286	286	280	281
Race/Ethnicity		*		*	*	*
Asian/Pac. Islander	0.79	0.80	0.96	0.68	0.28	0.62
Black	0.82	0.74	0.94	0.62	0.55	0.69
Latina/Hispanic	0.75	0.83	0.97	0.61	0.47	0.51
White	0.88	0.99	1.00	0.86	0.14	0.82
Multi-ethnic	0.80	0.80	1.00	0.60	0.40	0.50
Other	0.88	1.00	1.00	0.88	0.25	0.88
Declined	1.00	0.00	1.00	0.00	0.00	.
Missing	0.71	0.79	0.93	0.57	0.38	0.57
Education	*	*	*	*	*	+
Up to HS degree	0.65	0.80	0.95	0.50	0.42	0.58
Some college	0.85	0.83	0.95	0.73	0.55	0.64
College degree	0.91	0.95	1.00	0.86	0.19	0.76
Graduate degree	0.87	0.99	1.00	0.86	0.13	0.81
Missing	0.74	0.80	0.97	0.57	0.34	0.62
Insurance type	*	*	*	*	*	*
Medi-Cal	0.75	0.80	0.96	0.59	0.45	0.64
Private	0.89	0.98	1.00	0.87	0.14	0.76
Missing	0.91	0.98	1.00	0.89	0.14	0.82

* Stastistically significant at the 0.05 level.

+ Statistically significant at the 0.10 level.

Note. Full text of frames: 1. That babies should be fed on a set schedule. 2. That babies should be fed whenever they seem hungry.

Table 11. Frames about breastfeeding as compulsory or optional

	Exposure				Opinion	
	% that has heard…		In this set, % that has heard…		% that agrees with…	
	#1: Compulsory	#2: Optional	At least 1 item	More than 1 item	#1	#2
Overall sample	0.71	0.55	0.88	0.39	0.48	0.26
N	287	287	287		282	284
Race/Ethnicity	+	+			*	+
Asian/Pac. Islander	0.59	0.52	0.86	0.24	0.39	0.31
Black	0.79	0.47	0.88	0.38	0.61	0.15
Latina/Hispanic	0.89	0.39	0.94	0.33	0.75	0.11
White	0.66	0.65	0.87	0.45	0.39	0.32
Multi-ethnic	0.60	0.60	0.80	0.40	0.20	0.20
Other	0.88	0.50	0.88	0.50	0.50	0.13
Declined	1.00	0.00	1.00	0.00	1.00	0.00
Missing	0.86	0.21	0.86	0.21	0.77	0.21
Education		*		+	*	
Up to HS degree	0.85	0.30	0.90	0.25	0.65	0.15
Some college	0.76	0.39	0.85	0.29	0.58	0.24
College degree	0.65	0.54	0.80	0.38	0.47	0.22
Graduate degree	0.65	0.74	0.90	0.48	0.32	0.35
Missing	0.83	0.46	0.93	0.36	0.65	0.19
Insurance type	*	*			*	+
Medi-Cal	0.83	0.39	0.90	0.32	0.63	0.19
Private	0.63	0.63	0.84	0.42	0.39	0.29
Missing	0.64	0.78	0.93	0.49	0.36	0.34

* Stastistically significant at the 0.05 level.

+ Statistically significant at the 0.10 level.

Note. Full text of frames: 1. That a new mother should try to breastfeed even if she does not want to. 2. That if a new mother does not want to breastfeed, that is a good enough reason for her not to.

Table 12. Frames about the character of birth

	Exposure				Opinion	
	% that has heard…		In this set, % that has heard…		% that agrees with…	
	#1: Empower-ing	#2: Embarrass-ing	At least 1 item	More than 1 item	#1	#2
Overall sample	0.84	0.33	0.86	0.31	0.72	0.05
N	285	287	285	285	273	281
Race/Ethnicity	*	*	*	*		
Asian/Pac. Islander	0.82	0.14	0.86	0.11	0.61	0.07
Black	0.85	0.18	0.85	0.18	0.79	0.09
Latina/Hispanic	0.42	0.25	0.53	0.14	0.61	0.06
White	0.94	0.42	0.95	0.41	0.74	0.04
Multi-ethnic	1.00	0.30	1.00	0.30	0.90	0.00
Other	0.88	0.63	0.88	0.63	0.86	0.13
Declined	1.00	0.00	1.00	0.00	1.00	0.00
Missing	0.64	0.14	0.64	0.14	0.55	0.08
Education	*	*	*	*	+	
Up to HS degree	0.65	0.15	0.70	0.10	0.59	0.05
Some college	0.87	0.20	0.90	0.18	0.82	0.08
College degree	0.92	0.37	0.94	0.35	0.67	0.08
Graduate degree	0.95	0.42	0.95	0.42	0.79	0.02
Missing	0.58	0.27	0.64	0.20	0.63	0.07
Insurance type	*	*	*	*		*
Medi-Cal	0.69	0.22	0.74	0.17	0.70	0.09
Private	0.95	0.41	0.96	0.41	0.76	0.02
Missing	0.89	0.38	0.89	0.38	0.68	0.07

* Stastistically significant at the 0.05 level.

+ Statistically significant at the 0.10 level.

Note. Full text of frames: 1. That giving birth is an empowering experience. 2. That giving birth is an embarrassing experience.

Table 13. Frames about whether young babies have the ability to deliberately manipulate parents

	Exposure				Opinion	
	% that has heard…		In this set, % that has heard…		% that agrees with…	
	#1: Yes	#2: No	At least 1 item	More than 1 item	#1	#2
Overall sample	0.37	0.40	0.54	0.23	0.09	0.52
N	286	286	285	285	279	276
Race/Ethnicity		*	+		*	*
Asian/P. Islander	0.38	0.41	0.59	0.21	0.11	0.50
Black	0.29	0.18	0.35	0.12	0.18	0.28
Latina/Hispanic	0.53	0.20	0.51	0.20	0.25	0.26
White	0.36	0.51	0.61	0.27	0.02	0.67
Multi-ethnic	0.30	0.30	0.30	0.30	0.10	0.40
Other	0.63	0.50	0.63	0.50	0.00	0.57
Declined	0.00	0.00	0.00	0.00	0.00	0.00
Missing	0.14	0.14	0.29	0.00	0.17	0.15
Education	*	*	*	*	*	*
Up to HS degree	0.40	0.10	0.45	0.05	0.20	0.22
Some college	0.20	0.20	0.28	0.13	0.08	0.39
College degree	0.28	0.48	0.55	0.20	0.02	0.59
Graduate degree	0.47	0.60	0.70	0.37	0.03	0.74
Missing	0.41	0.19	0.45	0.14	0.23	0.21
Insurance type		*	*	*	*	*
Medi-Cal	0.33	0.15	0.37	0.10	0.17	0.29
Private	0.40	0.55	0.64	0.31	0.03	0.66
Missing	0.40	0.62	0.69	0.33	0.02	0.70

* Stastistically significant at the 0.05 level.

+ Statistically significant at the 0.10 level.

Note. Full text of frames: 1. That young babies try to manipulate their parents *on purpose*. 2. That young babies *cannot* try to manipulate their parents on purpose.

Table 14. Proportion of Respondents Exposed to Cultural Frames by Insurance Type

Women with Medi-Cal	Women with private insurance
75% or more……	
Pregnancy as inherently valuable	*Pregnancy as inherently valuable*
Breastmilk better than formula	*Breastmilk better than formula*
Flexible feeding schedule	*Flexible feeding schedule*
Set feeding schedule	*Set feeding schedule*
Breast-feeding as compulsory	Birth as empowering
Equally acceptable to nurse boys & girls	Maintain level of exercise
Mother as main effect on fetus	Drinking is not ok
	Drinking is ok
50 - 74%.....	
Epidurals as good	*Epidurals as good*
Decrease exercise	*Decrease exercise*
Maintain level of exercise	L&D complications as rare
Drinking is not ok	Epidurals as bad
Birth as empowering	Equally acceptable to nurse boys & girls
Drinking is ok	Breast-feeding as optional
L&D complications as common	Breast-feeding as compulsory
Increase level of exercise	Mother as main effect on fetus
	Babies cannot manipulate
25 - 49%.....	
God as main effect on fetus	*God as main effect on fetus*
Breastmilk & formula equally good	*Breastmilk & formula equally good*
Drinking is good	*Drinking is good*
Genetics as main effect on fetus	*Genetics as main effect on fetus*
Babies can manipulate	*Babies can manipulate*
L&D complications as rare	Increase level of exercise
Breast-feeding as optional	Pregnancy as instrumentally valuable
Epidurals as bad	Birth as embarrassing
	Increase level of exercise
0 - 24%.....	
Formula better than breastmilk	*Formula better than breastmilk*
More acceptable to nurse boys	*More acceptable to nurse boys*
More acceptable to nurse girls	*More acceptable to nurse girls*
Birth as embarrassing	
Pregnancy as instrumentally valuable	
Babies cannot manipulate	

Note. Frames that are in the same quartile for women in both groups are in italics at the top of each quartile list. Their placement is for visual clarity; it does not indicate greater exposure to them than to other frames in the same quartile.

Table 15. Exposure to contradictory frames

	Mean # sets within which >1 frame known	Std. Dev
Total	4.847	2.376
Race/ethnicity	*	
Asian or Pacific Islander	3.97	1.76
Black	3.59	1.62
Latina/Hispanic	4.75	2.38
Native American		
White	5.30	2.51
Multi-ethnic	4.70	1.89
Other	6.50	2.67
Declined	3.00	.
Missing	4.21	2.01
Educational achievement	*	
High school or less	3.80	2.14
Some college	3.49	1.70
Completed college	4.92	2.12
Completed grad. school	5.75	2.51
Missing	4.51	2.28
Insurance type	*	
Private	5.40	2.43
Medi-Cal	4.03	2.13
Missing	5.47	2.28

* Stastistically significant at the 0.05 level.

+ Statistically significant at the 0.10 level.

CHAPTER 2
Foundations of the Cultural Repertoire: An Investigation of Education and Social Network Effects among Expectant Mothers

Abstract

The challenges of operationalizing the cultural repertoire or "toolkit" have long hindered its empirical study. This has limited scholarly knowledge about the development and effects of cultural resources. This paper draws on original longitudinal survey data to investigate the foundation of individual cultural repertoire diversity. Using a novel, empirically-grounded measure of the variety of interpretive frames known by expectant mothers, I ask (a) whether more privileged respondents "consume" a wider variety of cultural resources than do less privileged individuals, as has been the pattern for the consumption of cultural products like music; and (b) whether this consumption is related to respondents' social network characteristics, as literature from select sociological subfields would suggest. I find that educational attainment and social network diversity independently predict repertoire diversity, and that these effects are each moderated by the respondent's status as a new or experienced mother. These analyses reveal a new way in which human and social capital confer cultural resources, while also suggesting that institutional processes and social network resources may reduce such disparities. The survey instrument presented here overcomes a long-standing barrier to studying individual cultural repertoires and can fruitfully be applied to other empirical contexts.

One of the most exciting developments in cultural sociology—defining culture as a set of resources for action (Lamont 1992; Lamont and Thévenot 2000; Swidler 1986; Swidler 2001)—has been challenging to operationalize empirically. We remain uncertain about how individuals stock their "toolkit" and how they employ multiple cultural tools to their advantage. This paper advances a novel measure of individuals' variety of cultural resources, and uses that measure to investigate what individual characteristics foster diverse toolkits.

What differentiates people who "consume" a greater variety of cultural products and resources from people who consume fewer? This question has animated the great deal of research on the consumption and diffusion of cultural products like art, theater, and music, some of which has found that those who consume a greater range of cultural products are in a variety of ways more privileged than those who consume a smaller range (Peterson and Kern 1996; Peterson 1992).[30] What shapes consumption of kinds of culture that are substantively different from these "products," however—aspects such as the resources theorized by Swidler (1986; 2001) in her influential cultural repertoire theory—is far less well understood.

This theory asserts that culture causally shapes individual actions and outcomes by providing the resources or "tools," with which people act in specific social contexts (e.g., skills, styles, ways of understanding the world). A key implication of the theory is that individuals with

[30] More recent research has complicated these findings (e.g., Peterson 2005; Van Eijck 2001; van Eijck and Lievens 2008), but in most cases there is evidence that socioeconomic status is salient to the consumption of these cultural products.

richer, more diverse repertoires are better able to situate their actions and perspectives and to face diverse and unpredictable challenges than are people with less rich repertoires: "People are better equipped for life if they have available multiple approaches to situations, if they can shift justifications for their actions, and if they can mobilize different meanings to organize different lines of action" (Swidler 2001:182-3).

A wide range of sociological studies have employed repertoire theory (Boltanski and Thévenot 1999; Coser 1966; Derné 1994b; Derné 1995; Erickson 1996; Giordano, Cernkovich and Rudolph 2002; Harding 2007; Harding 2010; Lamont 1992; Lamont and Small 2008; Lamont and Thévenot 2000; Lareau 2003; Mills 1940; Small 2002; Small 2004; Swidler 2001), but works such as these reveal little about the characteristic at the heart of it: having diverse resources in one's toolkit. (See as exceptions Fosse 2010; Harding 2007; Harding 2010) Moreover, they do not systematically investigate the origins of more or less diverse cultural resources on the level at which the repertoire was originally theorized: the individual. These lacunae result from the conceptual and practical barriers to operationalizing the cultural repertoire.[31]

In this paper I address this problem in two steps. First, I create a context-specific measure of the cultural repertoire by focusing on one important and particularly measurable aspect of it: interpretive frames. Following Goffman (1974), these are the schemas of understanding that make various aspects of social life meaningful and comprehensible—the "organizational premises" through which individuals perceive and define their social environments.[32] I measured pregnant women's exposure to diverse interpretive frames relevant to pregnancy, childbirth and infant care via an original, fieldwork-based survey instrument, and used it to calculate a measure of respondent access to a meaningfully diverse set of interpretive cultural resources. Second, I investigated the sources of individuals' repertoire diversity, focusing primarily on the human and social capital they have, as suggested by a review of relevant literature.

I find that education and the occupational diversity of a respondent's social network independently predict repertoire diversity. These predictors are partially moderated by the respondent's maternal status (i.e., whether she is a first-time or experienced mother). Among other things, these findings suggest that the well-documented effects of education and social networks on beneficial outcomes (e.g., job attainment) may function partly by conferring cultural resources. Via the generation and analysis of novel data on individual cultural resources, this paper overcomes a long-standing barrier to understanding how the cultural repertoire develops.

The Origins of a Diverse Repertoire

Swidler (1986; 2001) provides some clues as to the possible origins of diverse cultural resources. In *Talk of Love,* she observes that her interviewees gained new ways of understanding their marital relationships via exposure to people with practices different from their own, via participation in diverse institutions and activities (e.g., church, counseling, self-help workshops), or via "integration into a wider community" (2001, p. 52). This idea that one can learn varied ways of thinking or seeing by coming into contact with individuals of different communities and social

[31] For recent discussion of the strengths, limitations, and unanswered questions of repertoire theory, see Swidler 2008 and Vaisey 2008a, 2008b.

[32] This is similar and comparable to concepts used in other contemporary sociological work as well. Harding (2010), for example, employs Young's (2004) concept of "frames": "Ways of understanding 'how the world works'… [that] encode expectations about consequences of behavior and the relationships among various parts of the social world. A frame structures how we interpret events and therefore how we react to them" (142).

locations is suggested by some classic sociological theories as well (Mead 1934; Simmel 1971a; Simmel 1971b; Zerubavel 1997). Other works that draw on repertoire theory, however, such as Derné (1995), suggest that it is individual characteristics (e.g., human and economic capital) that enable individuals to access diverse interpretive frames. Research in cognitive and social psychology support both these possibilities, locating the source of different pieces of culture in the social environment (for a review see DiMaggio (1997), p. 267.) Below I consider these influences by reviewing research in cultural sociology and related fields. Relevant explanations sort broadly into socioeconomic and social network factors.

Socioeconomic foundations

Several studies have demonstrated that higher status individuals consume, on average, more diverse sets of cultural products than do individuals of lower status, broadly defined (e.g., Peterson and Kern 1996; Peterson 1992; Peterson and Simkus 1992). They find that more educated individuals, those with higher incomes, or those in more prestigious occupations exhibit more such "cultural omnivorousness" than do those with less education, lower income or less occupational status, though recent work has revealed more complex distributional patterns (Emmison 2003; Van Eijck 2001; van Eijck and Lievens 2008; Warde 2011; Warde and Gayo-Cal 2009; Warde, Wright and Gayo-Cal 2007). Van Eijck (2011), for example, found level of education to be "a better predictor of musical tastes than occupational status" (p. 1180), and Goldberg (2011) found that having a high income is associated with a different variety of musical tastes than is having a high level of education. Thus, though there is little consensus about whether education, occupational status or income is the most relevant axis of difference in omnivorousness, these works all indicate that there is a socio-economic gradient in the variety of culture products individuals consume.

By contrast, the acquisition of cultural *resources* such as frames or skills is less well understood. How do individuals pick up the styles and develop the habits, for example, that make up the core of their cultural repertoires? Bourdieu (1984) and Lareau (2003) provided class-based explanations for the acquisition of particular dispositions, though these focus more on the content of the dispositions than their variety. Basil Bernstein (1962; 1971) identified a social class basis for an especially abstract resource: the ability to use both restricted and elaborated codes of speech, as the social context required, was more prevalent in his middle class subjects than among the less privileged.[33] More recently, Khan (2011), who observed both the consumption of cultural products and the acquisition of cultural skills at an exclusive boarding school, argued that elites today distinguish themselves from non-elites by "constituting themselves quite freely across social boundaries and distinctions" (p. 151). Alongside their formal education these young elites learn not only to consume and appreciate foods and music from "a wide gamut of the social strata," but also to know how to act and be at ease in both "high-" and "low-brow" settings. Finally, in a slightly different vein, Derné (1995) argued that individuals with college degrees were more able to *deploy* varied cultural tools because of the cognitive and symbolic resources that higher education conferred.

Resources such as interpretive frames, however, may not be as tightly connected with education and income as would be the consumption of a wide variety of cultural objects or events, or even the acquisition or deployment of Swidlerian "styles" or "skills." Exposure to interpretive frames does not necessarily cost anything, require transportation, or take up a particular amount of

[33] His work suggests this ability may derive from the exposure to individuals with different interests and "identifications" from oneself that is afforded by membership in the middle- vs. working-class (Bernstein 1962, 1960, p. 259, 1964 p. 61).

time. An individual may, just by eavesdropping in a waiting room or reading a brochure, for example, become exposed to different frames about what an emergency Cesarean section "is" or "means." Such free sources could make someone wealthy, so to speak, in interpretive resources. Moreover, classic theories of disenfranchised groups suggest that multiple perspectives can grow out of *disadvantage*, as W.E.B. DuBois (1995 [1903]) described regarding turn-of-the-century African Americans' "double consciousness." In a contemporary update, Harding's (2010) study of urban youth reveals that low-income neighborhoods are in fact more culturally heterogeneous than are more privileged neighborhoods.

Despite the lack of research dedicated to investigating the role of material resources in repertoire development, these works suggest that it likely has a socioeconomic gradient; its direction, however, is uncertain.

Hypothesis 1.—*The greater the individual's educational attainment, the greater her cultural repertoire diversity.*

Network foundations

Beyond socioeconomic status, individuals' access to others with different cultural resources is a likely source of repertoire diversity. Two social network characteristics are especially relevant to individuals' exposure to new perspectives. First, social network *diversity*, which is most typically measured as the variety of occupations—particularly those of quite different levels of prestige—that are represented in a social network (Lin 2000; Lin, Cook and Burt 2001; Lin and Dumin 1986). Membership in a network that includes diverse occupations is correlated with higher levels of education and higher income (Lin 2000; Lin, Fu and Hsung 2001). The connection of network diversity to diversity in interpretive tools is suggested by both sociological theories and empirical studies. For Mead (1934), individuals' perspectives and the complexity of their "imagined other" derived from interaction with diverse others and, for Zerubavel (Zerubavel 1997; Zerubavel and Smith 2010), from participation in diverse "thought communities." Both Small (2002) and Harding (2010) find that young neighborhood residents learn new interpretive frames from older generations, and behave differently as a result.[34] Social network diversity is also correlated with characteristics that could help individuals adopt and deploy a range of interpretive frames. Exposure to individuals from diverse social positions, for example, is tied to a sense of mastery (Erickson 2008) and intellectual flexibility (Coser 1975). Contact with a wide range of people, then, could provide individuals with content for, and capacities to employ, a diverse cultural repertoire.

Repertoire diversity may also be influenced by the *structure* of an individual's social network. Research finds that the form of individuals' relationships in a network—not the characteristics of the members—determines the resources it provides. Drawing on the insights of Simmel (1971b), Durkheim (1965) and Granovetter (1973; 1983), this formal perspective is most famously represented in Ronald Burt's (1992) theory of "structural holes." In brief, Burt argues that individuals ("egos") derive informational and power advantages from mediating between "non-redundant" sources of information. Individuals or "alters" who are not connected to other individuals within an ego's network are more likely than "connected" alters to possess ties to different groups of people, and therefore to serve as unique sources of ideas and perspectives. By virtue of having such "spaces" and "bridges" to diverse groups in one's network, an individual is

[34] Indeed, much in the study suggests that it is the diversity of individuals within poor communities—a diversity created and sustained by material hardship and violence—rather than the neighborhood poverty itself, that underlies the cultural heterogeneity Harding (2010) observed.

equipped with more—and more innovative—solutions to challenges, and more skills with which to navigate a complex social world, than are individuals with more redundant networks (Burt 2004; Burt 2005; Granovetter 1973; Granovetter 1983).[35] As social networks typically evolve toward interconnectedness, structural holes take significant resources to maintain (Burt 2002); this type of network "sparseness" is more often found, like certain varieties of cultural omnivorousness, among more privileged and/or more educated individuals (Burt 1992; Burt 2004; Fischer 1982; Padgett and Ansell 1993). Individuals with greater material resources, then, may be more likely to sustain network forms that yield varied cultural resources.

Finally, these theories are validated by a small body of research that explicitly investigates the intersection of social network resources and cultural consumption. In her study of the Canadian security industry, Erickson (1996) found that employees with social contacts in more varied locations of the company hierarchy—"network variety"—were familiar with a wider variety of both popular and elite cultural products than were those with more circumscribed networks, independent of social class. She argues that contact with individuals in different social locations "provides a channel of access to [their] distinctive cultural repertoire," concluding that it is the "strongest source of cultural variation" (Erickson 1996, p. 247, 249).[36] This complements DiMaggio's (1987) assertion that individuals who move regularly across different social milieus require mastery of diverse cultural genres, and Peterson and Kern's (1996) finding that membership in heterogeneous social networks corresponds with cultural omnivorousness (see also Relish 1997). Omar Lizardo (2006) and others have recently reinvigorated this debate, using longitudinal data to show that in certain contexts social networks are *shaped by* cultural tastes and consumption rather than vice versa.[37]

Though none of these works specifically addresses the diversity of individuals' interpretive frames, as studied here, they suggest, by extension, a connection between social networks and cultural repertoire diversity.

Hypothesis 2.—*The greater the individual's social network diversity, measured as occupational diversity, the greater her cultural repertoire diversity.*

DATA & METHODS

I collected several types of data concerning the frames that new mothers know and deploy. First, to develop the original Cultural Heterogeneity survey module, I conducted observations of prenatal/new mother classes as well as over a dozen expert interviews with obstetricians, midwives, labor and delivery nurses, and birth coaches (*doulas*). Next, with a collaborating medical research team, I collected longitudinal survey data in a variety of care settings representing different institutions and communities; these are described below as they are the key data used in

[35] To elaborate, "People with connections across structural holes have early access to diverse, often contradictory, information and interpretations, which gives them a competitive advantage in seeing and developing good ideas. People connected to groups beyond their own can expect to find themselves delivering valuable ideas, seeming to be gifted with creativity. This is not creativity born of genius; it is creativity as an import-export business" (Burt 2005, p. 63).

[36] She explains further: "Those who interact with a wider variety of people must respond to a wider variety of culture shown by others and, hence, develop a wider repertoire of culture [DiMaggio (1987)]… Cultural variety does not come primarily from class, or any other single kind of attribute or social location, since each of these is related to just some forms of culture. Instead, the most powerful single teacher of cultural variety is contact with people in many different locations: network variety builds cultural variety" (pp. 221-222, 224).

[37] For an excellent review of these findings see Pachucki and Breiger (2010).

this paper. Finally, I conducted longitudinal in-depth interviews with a subset of 67 survey respondents I draw on here exclusively to interpret and contextualize select statistical findings.

Along with my collaborators, I recruited pregnant respondents from five Northern California hospital-based clinics (two public, three private), two free-standing community clinics (one public, one private), an online parenting email group, and a home-birth email group.[38] The respondents completed up to three self-report surveys as they transitioned from pregnancy through 2-3 months postpartum. Two of these surveys—one before birth (ante-natal), one after (post-partum)—were designed to collect information on respondent preferences regarding mode of delivery, as well as demographics, obstetric history, experience of childbirth, and postpartum depression symptoms. A second ante-natal survey, which I designed, contained the Cultural Heterogeneity (CH) measure as well as measures of social network diversity, social support, personality, and other constructs.[39]

The sample is not statistically representative of the California Bay Area. Instead, we carried out purposive sampling in order to represent women who were receiving care at diverse institutions and who had a wide range of social, educational, and material resources; these patient populations differ in theoretically interesting ways (Small 2009). Over 325 pregnant women completed at least part of the CH survey, which was used to create a cultural repertoire diversity score, described below. Respondents ranged widely with regard to race/ethnicity, education level, and maternal status, though the sample, like much research on motherhood, skews toward the more privileged.

Of the respondents with CH data, 225 also had complete data for the variables needed for the analyses presented here; these draw from the two ante-natal surveys (e.g., social network diversity, time between the survey and their due date, as well as education and race/ethnicity, which came from the second ante-natal survey). See Table 1 for descriptive characteristics.

Measures

Dependent variable: Cultural Repertoire Diversity (CRD) score. With the Cultural Heterogeneity (CH) survey I aimed to measure the diversity of frames the respondents could employ to interpret (evaluate, understand, make sense of) practices and outcomes specific to pregnancy, childbirth, or early parenting. I follow Goffman's (1974) use of the concept as a "basic element" of daily life that allows individuals to comprehend and understand the meaning of a given scene or interaction (pp. 10-11, 21, 26). Such interpretive frames simultaneously inform individuals and involve them in the scene, and individuals may then act based on these perceptions (p. 345). This conceptualization asserts that social interactions, practices, or settings do not have an inherent character; instead, their meaning—their characterization as safe or risky, virtuous or depraved, special or mundane—varies with the frame(s) applied to them.[40] Similarly, the practices and outcomes characterized here in the CH survey are the subjects of different—even contradictory—framings.

These frames are a type of cultural "tool" that features prominently in scholarly

[38] Survey data were collected in collaboration with a medical research group at a regional medical school, as well as seven apprentices participating in an undergraduate research apprenticeship program at the study author's institution.

[39] One ante-natal and one post-partum survey were designed by the collaborating medical research team. The second ante-natal survey that contains the repertoire diversity measure was designed by the study author and fielded for pilot testing by undergraduate research assistants.

[40] "...Because of the very nature of framing, events have an essentially loose character, subject to doubt, a looseness that effects both the actor and his claims and the witness and his" (Goffman 1974, p. 324).

representations of the cultural toolkit. Moreover, these "interpretive frames" are more measurable than other aspects of the cultural repertoire. They were easy for the respondent to recognize as familiar or not—they are much more superficial and recognizable than are deep cognitive schemas or worldviews—and they therefore lent themselves well to a survey format. Conversely, other aspects of the cultural repertoire, such as embodied styles and skills of self-presentation, would be extremely difficult to assess on a survey; they would likely require ethnographic study across a variety of interactional contexts.

I drew on six months of pilot fieldwork to develop the survey items. This "Cultural Heterogeneity" module presents the respondent with a series of 29 different frames ("opinions" in the survey prompt) relevant to specific pregnancy-, childbirth-, or parenting-related practices (e.g., "That, all in all, epidurals are good for birthing women," "That it is OK for a pregnant woman to drink a glass of wine or beer every now and then," "That babies should be fed whenever they seem hungry.").[41] For each one the respondent is asked if she is familiar with the opinion; from what source(s) she has heard it (social contact, institutional and media); and what she thinks about it (*strongly agree* through *strongly disagree*). Each opinion item is part of one of 12 sets of two or three opposed statements that are scattered randomly throughout the list of 29. (E.g., there is both "All in all, epidurals are *good* for birthing women," and "All in all, epidurals are *bad* for birthing women." Please see Appendix A for more information.)[42] Familiarity with multiple linked opinions then indicates respondents' exposure to opposing frames.

For each respondent, I calculate a Cultural Repertoire Diversity (CRD) score. The CRD score represents the degree to which respondents have been exposed to opposing frames about a specific phenomenon. It is designed to measure the *diversity* of frames to which the respondent has been exposed, thereby operationalizing having diverse—that is, meaningfully different—interpretive tools that one could employ for a given problem.[43] The *content* of the frames is crucial for mapping this diversity but is not central to the analysis itself. (See Garrett 2013a for analyses of CRD content.)

I calculate the score by subtracting 1 from the number of frames the respondent knows within each of the 12 sets in order to indicate the presence of *opposing* frames. If the respondent knows none or one of a set, she gains 0 points on the score. (Knowing only one within a set means one does not know any opposing frames about that particular topic.) If a respondent knows two frames in a set, she would gain 1 point; and if she knew three frames in a three-item set, she would gain 2 points. These set-based scores are all added together (range 0 - 17).

Independent variables

Social network diversity. Given the limits of a self-report survey instrument, I employ a measure of occupational diversity in respondents' social networks. I designed a customized "position generator" instrument, which indicates respondents' access to individuals in a broad

[41] Note that this measure of the cultural repertoire is grounded in a very particular socio-historical context. Based on the six months of ethnographic fieldwork I conducted in 2009, this variety of interpretive frames is specific to the context of contemporary childbirth education, prenatal care, and new mother support provided to women across socioeconomic strata in this particular region.

[42] There are many other behaviors and outcomes in the transition to first-time motherhood that might have been good candidates, but which were excluded because there were not concise, mutually exclusive frames with which to match them.

[43] The instrument's focus on respondent *exposure* to these interpretive frames is consistent with the position that coming into contact with a new cultural resource shapes individual practices and perspectives independent of one's acceptance or rejection of it (Swidler 2001).

range of occupations (Lin, Fu and Hsung 2001).[44] This widely used survey-based measure of social network diversity taps a construct similar to that measured in Erickson's (1996) study of network diversity and cultural variety. It asks respondents to indicate whether they know a man and/or woman in each occupation, allowing me to generate both gender-neutral and gender-specific network diversity scales (each 0 - 14).

Education is measured as having completed one of four levels of schooling: high school degree or less; some college education; completed college; and completed graduate school. Despite dedicated attempts to recruit a broader sample, a majority of the respondents have a college or graduate degree. This skew in the distribution of education modestly constrains its explanatory power in analyses.

Control variables[45]

Respondent race/ethnicity is included in the models in order to distinguish its effects from those of education, with which it is correlated. It was measured via six self-report categories: (1) Asian American or Pacific Islander; (2) African American or Black; (3) Hispanic; (4) Native American; (5) Caucasian; (6) Multi-ethnic or Other. No respondents reported "Native American."

Whether the respondent has been the mother of an infant before ("*maternal status*") is included in all models because it correlates with social network diversity and because research indicates that behaviors in and experiences of the transition from pregnancy to parenting vary substantially by maternal status. Regression models also include a measure that indicates the number of months between the date the respondent completed the cultural heterogeneity measure and her estimated due date ("*ante-natal survey lag*"), as this time lapse (a) acts as a proxy for the opportunity to consume new information, and (b) is associated with other relevant respondent characteristics.

The following analyses were performed using the STATA 13 statistical software platform. Ordinary least squares regression was, statistically, a reasonable fit for the data (see supplemental Table B1). However, the repertoire diversity scale is most appropriately conceptualized as a count, not as a continuous scale for which acquiring each "point" is independent of acquiring the others, and for which movement from one point to another point means the same thing at any location on the scale. Therefore, negative binomial regression was the appropriate model to use. Its coefficients refer to logged counts, so I present findings in terms of the predicted scores generated by STATA's "margins" command.

Below I test Hypotheses 1 and 2, which posit that cultural repertoire diversity is predicted by educational achievement and social network diversity; these analyses are based on ante-natal survey data. In all of the analyses, "Completed graduate school" and "White" are the reference categories for education level and race/ethnicity, respectively.

[44] There are many ways in which social networks can be diverse. Here I am using occupational diversity as a proxy because it signals respondents' exposure to people in different social locations more directly than does ethnicity- or age-based diversity, for example. Moreover, this choice allows my findings to be in dialog with relevant studies like Erickson (1996).

[45] I did not include age in these analyses. The age variable had considerable missing data and did not contribute substantively to the models.

FINDINGS

Describing Repertoire Diversity in the Sample

Familiarity with the opinions that comprise the cultural repertoire diversity (CRD) index varied substantially, from less than 3% of the sample who had ever heard that it was more appropriate to breast-feed either boys or girls than the opposite sex, up to 100% who had heard that breast milk was better than formula for infants. Of the sets comprised of three opposed frames, those concerning drinking while pregnant, physical activity and the superiority of breast milk versus formula are best known.[46] Of the sets comprised of two opposed frames, those regarding flexible versus scheduled infant feeding, the subjective experience of pregnancy, the degree to which preference should enter into the decision to breast-feed or not, and the evaluation of epidural use were best known. In general, these mirror the issues and frames most often found in media representations of pregnancy and childbirth and in public health campaigns. The least well-known frames included those indicating that formula is better than breastmilk for infants, and that it is more appropriate to breastfeed babies of one sex over the other.

The repertoire diversity scale has a possible range of 0 to 17. In the sample of nearly 300 respondents with complete data on the measure, the observed range was 0 to 15; of the respondents with complete data on relevant correlates for the regression models presented below, the range was 0 to 13 and the mean was 5.54 (SD = 2.84). CRD score correlated positively with characteristics that in the contemporary U.S. typically indicate greater social status and resources (e.g., educational achievement, self-reporting as White, having private insurance), and information seeking practices (reading online, volume of reading online, and, marginally, taking a childbirth class). It correlated negatively with being African American, multiracial/"other," or (at marginal significance) Asian/Pacific Islander; and having public health insurance. See Table 2 for CRD scores by subgroup.

Origins of a Diverse Repertoire[47]

Hypothesis 1.—*The greater an individual's educational attainment, the greater her cultural repertoire diversity.*

Regressing CRD on education reveals a significant positive relationship between education level and the diversity of respondents' interpretive frames (Table 3, Model 2), net of race, maternal status, and time in months between taking the survey and the respondent's due date. The "consumption" of interpretive frames, then, follows a similar pattern to that found for consumption of cultural objects like art and music.[48] (Predicted scores will be discussed in the full model.)

---

[46] For example: "That breast milk and formula are *equally good* for infants;" "That *breast milk* is better than formula for infants;" and "That *formula* is better than breast milk for infants."

[47] Though the data used in these analyses are all from the ante-natal surveys, I use the terms "origins" and "predict" here because the bulk of respondents' educational achievement and network development likely preceded respondents' consumption of perspectives relevant to child-bearing and -rearing.

[48] Though the pseudo R-squared value for this and other NBREG analyses can provide information for comparing fit between models, it does not indicate the proportion of variance in the dependent variable explained like (non-pseudo) R-squared does in OLS regressions.

Hypothesis 2.—*The greater an individual's social network diversity, measured as occupational diversity, the greater her cultural repertoire diversity.*

I hypothesized that occupational network diversity is associated with repertoire diversity. Tables 2 (Model 3) and supplemental Table B2 show this connection. Overall network diversity positively and significantly predicts cultural repertoire diversity; the female-only social network predicts it slightly better; the male-only network coefficient has a similar relationship to CRD but is not statistically significant (Table B2). As pregnancy and the larger peri-natal period are times in women's lives when they reach out particularly to other (often more experienced) women, it is expected that the diversity of their female networks would more significantly affect their resources—interpretive and otherwise—than would the diversity of their male networks. My interview data show that respondents use their female contacts much more often than male contacts when seeking advice about pregnancy, childbirth and parenting. I therefore use the female network measure in the subsequent analyses. Respondents in the regression sample had an average of 6.37 (SD = 2.71) different occupations represented, out of the possible 14, among the women they knew.

In the same regression model, education and social network diversity have robust *independent* effects (see Model 4 in Table 3). The effect of education on CRD maintains the same pattern as it did alone. Having high school degree or less, or some college, corresponds to CRD score of 4.72 and 4.17, respectively. This is significantly lower, by half of a standard deviation, than the average CRD score of 6.33 held by respondents with graduate degrees.

The effect of female social network diversity on CRD remains significant as well. An increase of one standard deviation in network diversity increases the CRD score by 1.11, which is about 40% of a standard deviation on that scale. A social network diversity score of 4 (25^{th} percentile of the sample) corresponds to a CRD score of 4.90, whereas a social network diversity score of 10 (90^{th} percentile) corresponds to a CRD score of 6.24; this is significantly higher by about half a standard deviation. Going from the bottom to the top of the observed range of the SND scale (0 - 13) approximates just over a full standard deviation increase in CRD score, net of education and all of the other controls the model.

Because education and female social network diversity were correlated, it is informative to consider predicted scores for these two variables together. The average CRD score for the respondent with low education (high school degree or less) and low levels of social network diversity (e.g., SND = 1 or SND = 4) were 3.75 and 4.23, respectively; for someone with the highest level of education and high levels of social network diversity (e.g., SND = 10 or SND =13), the average CRD scores were 7.25 and 8.18. These scores differ by 1-1.5 standard deviations on the CRD scale. Education and social network diversity clearly contribute to repertoire diversity independently, and to a substantively important degree.

Moderating the effects of education and network diversity

Nelson (2009) and others have vividly portrayed the considerable changes women experience in the process of becoming a mother, and the resultant difference in women's first, versus subsequent, experiences of childbirth and mothering. Interview data from this study also reveal quite different information-seeking and preparatory activities between first-time and "experienced" mothers. I chose, therefore, to investigate whether the effects of education and social network diversity on CRD varied by maternal experience. Tables 4 and 5 display results (see highlighted lines).

The interaction effects are significant in each model, and both reveal the same pattern: that

at higher levels of education and social network diversity, *experienced* mothers have higher CRD scores than new mothers do. At lower levels of each, expectant *new* mothers have the repertoire diversity advantage. Considering predicted scores, it appears that experienced mothers gain more repertoire diversity via their educational and social network resources than do new mothers. New mothers with high levels of education still have higher CRD scores than do their less educated counterparts, but this is less tightly connected to their education than it is for experienced mothers. This pattern could be interpreted a few different ways. Drawing on information collected from the interview component of the study, however, I suggest the following.

In the sample, new and experienced mothers have relatively similar average CRD scores (5.227, range 1-12, and 5.822, range 1-13), the latter at a slight advantage. Considering predictions from the model in which maternal status interacts with network diversity, the data show that new mothers' CRD scores are spread across a relatively small, middle range (4.83-5.82) and do not vary significantly by network diversity. Experienced mothers' CRD scores, however, vary more widely (3.28-8.73), and significantly, based on their network diversity. (Note that they on average had more diverse networks than did new mothers, and that their repertoires and networks contain both the resources that they had when they were expectant first-time mothers and those that they have gained since.) This suggests that social network diversity may influence the acquisition of new cultural frameworks not so much in advance of their first birth but as women pass *through* birth and early parenting. Similarly, it is possible that educational achievement—manifest in information-seeking, information -evaluation and comprehension activities—is activated and deployed most when one is faced with the uncertainties and challenges of new motherhood.

A complementary explanation for why social network diversity and education matter more for experienced than for new mothers' CRD scores may be true as well. Drawing on patterns revealed in the accompanying interviews, I suggest that the particular contexts that new mothers occupy could suppress the stratifying effects of SND and education. New mothers across social groups consume more information, more intensely and across more contexts than do mothers who have already delivered and parented a young child. This happens via formal institutional channels (e.g., healthcare provider consultations, childbirth classes, prenatal yoga, Women, Infants & Children workshops and counseling); via their independent information-seeking (e.g., books, magazines, websites, etc.); and via unsolicited advice from individuals inside and outside of their social networks. This study's accompanying interview data and recent qualitative work on pregnant women (Bessett 2012, Bridges 2011, Han 2013, Pollack 2011) indicate that these experiences and behaviors appear to be quite common across levels of education and privilege, though the contexts in which they take place are empirically dissimilar.

Because much of this information-seeking and passive information-receiving cuts across lines of social difference, these activities may minimize an otherwise socioeconomically-graded source of difference and thereby start expectant new mothers of varied education and social network characteristics on a somewhat even footing. Education and social network diversity then may come meaningfully into play only as women exit this context and transition into motherhood, as is indicated by the stratified repertoires of experienced mothers.

DISCUSSION & CONCLUSION

The analyses presented above show that cultural repertoire diversity can be measured via a relatively simple survey instrument. The Cultural Heterogeneity survey instrument overcomes a

long-standing barrier to studying individual cultural repertoires and in doing so provides novel information about what individual attributes predict having a wider variety of cultural resources. This instrument can easily be modified and applied to other empirical contexts as well.

Controlling for other relevant factors, I found that individuals with high education and high network diversity have more diverse repertoires than do individuals with less. The repertoire advantage of diverse networks is consonant with Erickson's (1996; 2001; 2008) work on the consumption of diverse cultural products but, by linking such diversity to an arguably more influential aspect of cultural resources—different ways of understanding the world—these data show social network characteristics to be even more consequential to social life than previously thought.

These findings also complement those from the study that is arguably most comparable in focus and aim to this one. Harding (2010) found that cultural heterogeneity was more prevalent in very poor neighborhoods than less-poor ones, whereas my findings suggest more heterogeneity among more educated individuals. Two differences between these studies may explain this discrepancy. First, I measure here the cultural heterogeneity of individuals, whereas Harding measures it on the level of communities.[49] Second, Harding explicitly defines cultural heterogeneity as involving frames that are considered *legitimate* to at least some members of the community. My study defines repertoire diversity as familiarity with frames independent of respondent endorsement or legitimation of them, per Swidler's (2001) conceptualization. Second, by simultaneously controlling for network diversity and education, my analyses are able to discover network-based variation in "cultural heterogeneity" within more or less privileged communities, and education-based variation within more or less network-diverse communities. The social network diversity characteristic of the residents of Harding's very poor neighborhoods (e.g., contacts who are employed and unemployed, affiliated and unaffiliated with gangs or the underground economy, etc.) may in fact be the social characteristic that is producing cultural heterogeneity in those neighborhoods, not socio-economic disadvantage.[50]

The analyses also suggest that for expectant first-time mothers, the (interpretive) resources embedded in their networks and/or accessible with higher levels of education may be redundant with the variety of information they receive and consume—whether motivated by their own actions or provided, unsolicited, by the various institutions through which they pass. This context appears to render the effects of network diversity and educational achievement less influential for these women than they are for experienced mothers, who likely called on this social and human capital as they began mothering. Of note, these findings for new mothers suggest that institutions and individuals can actively "cultivate" repertoires if they so desire.[51]

Beyond the contributions to cultural sociology, these analyses advance research within social network studies as well. They examine network effects and resources outside of business contexts, as social network scholars have called for (Oliver, Kalish and Yair 2007). Second, they hint at a potentially radical insight: that if individuals with diverse social networks typically possess diverse cultural resources, this advantageous variety of cultural tools may be the mechanism that underlies the well-documented relationship between social network diversity and positive outcomes such as problem-solving and job opportunities. Circulating in diverse networks

[49] Though frames largely "work" via their being recognized and engaged by others (Goffman 1974; Swidler 1986, 2001), they are activated by, and their effects realized through, individuals' perceptions and actions.

[50] I am grateful to Ann Swidler for this insight.

[51] Related analyses (Garrett 2013c) suggest that repertoire diversity in fact predicts a greater frequency of postpartum depression symptoms, so this may not be desirable.

may foster positive social, emotional, and health outcomes *via* the development of a diverse cultural repertoire. (For reviews of the demonstrated benefits of having a diverse social network see Erickson 2003; Lin 2000.)

Finally, these analyses point to the potentially democratizing influence of social network resources. Though network resources—here measured as the diversity of occupations represented among one's acquaintances—track with education, they are not confined to the most educated; network diversity is able to give less educated women the same resources that formal education provides to those in more privileged social locations. In her study on "bridging" cultural products, Erickson (1996) observed that diverse social networks can act as the "liberal arts program" of the "continuing adult education of culture" (247). The interpretive frameworks studied here arguably represent an even more profound resource with which individuals can communicate, frame, and legitimate themselves and their actions.

Limitations

This study shows that at least one key dimension of the cultural repertoire can be systematically measured using a context-specific survey module. This measure cannot, of course, represent the full range of individual cultural repertoires. Indeed, it measures only the diversity of interpretive frames that women have about one particular context. However, it makes up in methodological leverage what it loses in substantive breadth. More than other types of cultural resources (e.g., styles of speech, habits of self-presentation) interpretive frames are recognizable to respondents and, as such, can be measured via surveys and elicited in interviews. I suggest that the format of this index represents an especially promising way to measure the diversity of individuals' interpretive, domain-specific frames. Future research could potentially employ a set of such context-specific measures as a proxy for repertoire diversity in general.

This study represents a starting point for better understanding individual cultural repertoires and the cultural repertoire concept more generally. To the extent that cultural sociology is at its core about investigating processes of meaning-making (Spillman 2002), these findings advance the sub-discipline. The aspect of the repertoire measured here describes the very structure and mechanisms of the frameworks with which individuals make meaning in social life.

Tables for Chapter 2

TABLE 1. SAMPLE DESCRIPTIVES (*N* = 225)

	%	n
Race		
Asian or Pacific Islander	10.2	23
Black/African American	8.9	20
Latina/Hispanic	7.6	17
White	0.0	0
Black/African American	65.8	148
Multi-ethnic/other	7.6	17
Missing or declined	0.0	0
Educational achievement		
High school or less	8.4	19
Some college	17.3	39
Completed college	28.9	65
Completed grad. school	45.3	102
Missing	0.0	0
Relationship status		
Single	12.0	27
Cohabiting	7.1	16
Married	54.7	123
Missing	26.2	59
Health insurance type		
Public (MediCal)[1]	27.1	61
Private insurance	54.7	123
Insurance data missing	18.2	41
First-time mother	56.4	225
Missing	0.0	0
Birth complications	21.8	49
Missing	34.7	78
	Mean	Std. Dev.
Age	32.29	5.59
Ante-natal survey lag (months)	3.06	2.38
Social network diversity (0-14)		
Entire network	8.41	2.98
Female network	6.37	2.71
Male network	5.21	2.76
CRD score (0-17)	5.54	2.84

TABLE 2. CRD SCORE BY SUBGROUPS (*N* = 225)

	Mean	Std. Dev.
Race		
Asian or Pacific Islander	4.65	2.08
Black/African American	3.70	1.81
Latina/Hispanic	5.65	3.10
White	5.89	2.99
Multi-ethnic/other	5.71	2.28
Educational achievement		
High school or less	4.58	2.76
Some college	3.92	2.17
Completed college	5.42	2.50
Completed grad. school	6.41	2.98
Health insurance type		
Public (MediCal)[1]	4.33	2.51
Private insurance	5.98	2.86
Insurance data missing	6.02	2.80
First-time mother		
Yes	5.26	2.54
No	5.90	3.17
Social network diversity (Female; 0-14)		
1st quintile (0-3 contacts)	4.33	1.99
2nd quintile (4 contacts)	5.38	2.30
3rd quintile (5-6 contacts)	4.97	2.77
4th quintile (7-8 contacts)	6.05	3.12
5th quintile (9-14 contacts)	6.53	2.96

TABLE 3. PREDICTING CRD SCORE WITH EDUCATIONAL ACHIEVEMENT AND SOCIAL NETWORK DIVERSITY (NBREG)

	(1)	(2)	(3)	(4)
Race/ethnicity: Asian/Pacific Islander……	-0.196	-0.156	-0.179	-0.153
	(-1.63)	(-1.35)	(-1.53)	(-1.35)
Race/ethnicity: African American……..	-0.443**	-0.180	-0.462***	-0.235
	(-3.23)	(-1.23)	(-3.44)	(-1.62)
Race/ethnicity: Hispanic……..	-0.008	0.213	-0.034	0.145
	(-0.07)	(1.52)	(-0.28)	(1.05)
Race/ethnicity: Multiethnic/Other……...	0.004	0.110	-0.026	0.074
	(0.03)	(0.89)	(-0.21)	(0.61)
Maternal status: First-time mother…….....	-0.062	-0.073	-0.009	-0.025
	(-0.91)	(-1.13)	(-0.14)	(-0.39)
Ante-natal survey lag (months)…….……..	0.021	0.016	0.018	0.014
	(1.47)	(1.16)	(1.26)	(1.00)
Education: High school diploma or less……..		-0.387**		-0.295*
		(-2.63)		(-2.02)
Education: Some College…….....		-0.460***		-0.418***
		(-4.22)		(-3.90)
Education: College Degree…….....		-0.176*		-0.181*
		(-2.34)		(-2.47)
Social Network Diversity – Women……			0.046***	0.040***
			(3.80)	(3.36)
Constant	1.731***	1.853***	1.413***	1.569***
	(22.83)	(23.46)	(12.64)	(13.65)
Constant	-2.722***	-3.129***	-3.004***	-3.436***
	(-7.39)	(-6.26)	(-6.59)	(-5.34)
N	225	225	225	225
Pseudo R^2	0.016	0.035	0.029	0.045
BIC	1121.3	1117.1	1112.8	1111.6

Note.—t statistics are presented in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

CHAPTER 3
Too Many Tools?
The Consequences of Cultural Repertoire Diversity among Expectant Mothers

Abstract

The challenges of operationalizing the cultural repertoire or "toolkit" have long hindered its empirical study. This has limited scholarly knowledge about the effects of individual cultural resources and about the accuracy of repertoire theory's key premises. This paper draws on original longitudinal survey data to investigate the effects of cultural repertoire diversity on individual wellbeing. Using a novel, empirically-grounded measure of the variety of interpretive frames known by expectant mothers, I find that, contrary to hypotheses derived from repertoire theory, women with more diverse cultural repertoires experience worse postpartum socio-emotional outcomes than do their counterparts, controlling for relevant covariates. Social psychological mechanisms underlying this finding are discussed. This paper overcomes a long-standing barrier to understanding how culture affects social life, identifies a previously unrecognized socio-cultural influence on postpartum mental health, and suggests new directions for the study of culture and cognition.

One of the most exciting developments in cultural sociology—defining culture as a set of resources for action (e.g., Lamont 1992; Lamont and Thévenot 2000; Swidler 1986; Swidler 2001)—has been challenging to operationalize empirically. We remain uncertain about how individuals stock their "toolkit" and how they employ multiple cultural tools to their advantage. This paper offers a novel measure of individuals' variety of cultural resources, and uses that measure to test a key premise of cultural repertoire theory. I find that, indeed, possessing the right cultural "tool for the job" is beneficial, but that, contrary to core assumptions of the theory, having a rich and diverse cultural repertoire can in some circumstances diminish individual wellbeing.

Drawing on an original longitudinal survey of expectant mothers, I test the effects of having a diverse repertoire during a time of serious uncertainty, the transition from pregnancy to early motherhood. For most contemporary women, this period is characterized by great investment in specific plans and considerable unpredictability. Their aspirations regarding safety, "naturalness," comfort, and other features of the experience are rarely all met, leaving new mothers in the position of having to make sense of and cope with these shortfalls. Cultural repertoire theory suggests that the more diverse one's cultural resources, the more "tools" one will be able to employ to navigate new situations and solve problems (Swidler 1986; Swidler 2001). Various sociological studies have employed this premise (Derné 1994a; Erickson 1996; Harding 2010; Small 2004; Swidler 2001), but none has systematically evaluated it. Even the study that has made the most progress

on this front (Harding 2007, 2010) is limited in what it can reveal about the influence of repertoire heterogeneity versus the effects of the content of the repertoire.[52]

In this paper I seek to overcome these deficiencies in two ways. First, I create a context-specific measure of the cultural repertoire by focusing on one important and particularly measurable aspect of it: interpretive frames. Following Goffman (1974), these are the schemata of understanding that make various aspects of social life meaningful and comprehensible—the "organizational premises" through which individuals perceive their social environments.[53] I measure pregnant women's exposure to diverse interpretive frames relevant to pregnancy, childbirth and infant care via an original, fieldwork-based survey instrument. From this I calculate a measure of respondent access to a meaningfully diverse set of interpretive cultural resources. Second, I conduct a rare empirical test of cultural repertoire diversity (CRD) effects by asking whether new mothers equipped with a wider variety of interpretive frames exhibite better postpartum wellbeing than do their counterparts with less diverse repertoires. If the repertoire works as theorized, having a diverse set of interpretive frames would help new mothers cope with the unexpected circumstances endemic to the perinatal period.

I find, contrary to hypotheses derived from cultural repertoire theory, that repertoire diversity leads to some *negative* outcomes: more frequent postpartum depression symptoms. Though further analyses show that knowing one particularly relevant interpretive frame is beneficial, familiarity with a variety of such frames is detrimental for mothers' emotional wellbeing. Via the development of a novel measure of cultural resources and the careful assessment of their effects on individual wellbeing, this paper overcomes a long-standing barrier to understanding how culture shapes social life. It demonstrates the complex individual-level effects of cultural resources and of the fragmented, multi-vocal manifestation of culture more generally (DiMaggio 1997). It also suggests new directions for the study of culture and cognition, and identifies a previously unrecognized psychosocial influence on postpartum mental health.

ISSUES IN REPERTOIRE THEORY AND RESEARCH

The Cultural Repertoire in Theory

The idea that individuals draw on cultural resources in order to frame, make sense of, and/or defend their actions has been employed more or less explicitly by a variety of scholars (e.g., Blair-Loy 2003; Boltanski and Thévenot 1999; Derné 1995; DiMaggio 1997; Fosse 2010; Harding 2007; Lamont 1992; Lamont and Small 2008; Lareau 2003; McLean 1998; Mills 1940). Swidler (1986; 2001) developed the most elaborated and widely-recognized treatment of this

[52] Harding's (2010) study made great progress in investigating the effects of cultural "heterogeneity." As I discuss later, however, its design cannot separate out the potentially divergent effects of cultural diversity from the content of the cultural resources (e.g., norm and models) that comprise it. The study I present here systematically measures the cultural repertoire diversity of individuals and allows me to investigate the effects of repertoire diversity, itself, independent of repertoire content.

[53] This is similar and comparable to concepts used in other contemporary sociological work as well. Harding (2010), for example, employs Young's (2004) concept of "frames": "Ways of understanding 'how the world works'… [that] encode expectations about consequences of behavior and the relationships among various parts of the social world. A frame structures how we interpret events and therefore how we react to them" (142).

"justificatory" (Vaisey 2009) or "post-hermeneutic" (Kaufman 2004) perspective, the cultural "toolkit" or "repertoire" model.

Cultural repertoire theory posits that culture affects individual action by providing individuals with the "tools" and "cultured capacities" with which they act (e.g., skills, styles of self-presentation, ways of understanding the world). Individuals selectively appropriate these cultural resources and transpose them from one context to another (Sewell 1992; Sewell 1996; Swidler 2001). People deploy these in more or less regular lines of action in order to navigate new situations and resolve problems. This focus on skills and resources challenges the perspective that culture affects individual action by instilling constraining values or motivations (Parsons 1951; Vaisey 2009; Weber 1958).

The repertoire model posits that individuals typically possess more cultural resources than they employ. This multiplicity in the repertoire helps actors to situate their actions and perspectives and to face diverse and unpredictable challenges: "People are better equipped for life if they have available multiple approaches to situations, if they can shift justifications for their actions, and if they can mobilize different meanings to organize different lines of action" (Swidler 2001, pp. 182-3). For example, women might have several frames for understanding an emergency Cesarean section. In my pilot interviews and observations, women variously interpreted it as a life-saving miracle, as a routine medical procedure, as a sign that a woman had "failed" at the first task of motherhood, and/or as an expression of Western medicine's authority over female bodies. Most used only one frame in characterizing the procedure, but others referenced multiple frames; many acknowledged that it could be seen in more than one way. These women held "in reserve" multiple understandings of the event. If these women or someone they knew experienced an emergency C-section, they could theoretically deploy one frame over another to, for example, legitimate the outcome or characterize it a certain way to a certain audience.[54]

Repertoire theory was intuitive and conceptually fruitful, ultimately used widely across the social sciences and humanities; Swidler's (1986) classic article has been cited in over 4,000 scholarly works.[55] Many scholars engage with the repertoire or toolkit exclusively as a conceptual tool, applying it to cases where they wish to characterize the availability of or shift among multiple framings and styles (e.g., Fine 2004; Kirk and Papachristos 2011; Walker, Martin and McCarthy 2008). Lamont and her colleagues have used the concept to explain that social classes, social movements, professional fields or national communities differ because they have access to different cultural repertoires (Lamont 1992; Lamont 2000; Lamont and Thévenot 2000). Others have written of cultural repertoires or the concept's precursors, such as "repertoires of contention" that shape social movements (Benford and Snow 1992; McAdam 1982; McAdam 1994; Tilly 1978). Many sociologists have used the repertoire concept to illuminate group differences in practices, dispositions and perceptions (Bourdieu 1984; Lamont 2000; Lareau 2003). Works such as these reveal little, however, about the sources of individuals' repertoire diversity or its consequences for individuals. (See as exceptions Fosse 2010; Garrett 2011; Harding 2007; Harding 2010). They do not systematically investigate the origins or effects of more or less diverse cultural

[54] Though such frames are not explicitly listed in Swidler's (1986, 2001) well-known "styles, skills and habits" trio, they are at the heart of the examples she uses to illustrate cultural tools. E.g., see case study discussions in the "Shifting Frames" section (p. 31), or Chapter 3 of Swidler (2001).

[55] Based on a search of Google Scholar, December 17, 2013. One sociologist found that it was the ninth most-cited work in sociology journals between 2008 and 2012 (http://nealcaren.web.unc.edu/the-102-most-cited-works-in-sociology-2008-2012/, accessed June 8, 2012).

resources on the level at which the repertoire was originally theorized: the individual. DiMaggio's (1997) assessment of scholarly conceptualizations of culture as "highly sophisticated but not fully operational" is as true today as it was fifteen years ago (p. 263).

These problems result from the conceptual and practical barriers to operationalizing the cultural repertoire. Surveys have not collected information on the diversity of frames available to individuals (Harding 2007, p. 352). Moreover, measuring other components of the repertoire—"styles, skills and habits," for example—would likely require considerable ethnographic work and would be difficult to standardize across social settings. The lack of such measures has inhibited the development of repertoire theory. Are those rich in cultural tools really more able to navigate social life? To realize their life chances? Are they better off overall? Currently, the repertoire concept remains nebulous and under-theorized, subject to untested and over-determined theoretical applications.

The Effects of Repertoire Diversity

Many scholars have written about individuals' deployment of—and the putative effects of having—diverse cultural tools. These works suggest that possessing and deploying a variety of cultural resources helps the individual navigate her social world. Based on her study of "cultural variety" in a large company, for example, Erickson (1996) argues that "the most useful cultural resource [for individuals] is a little working knowledge of a lot of cultural genres combined with a good understanding of which culture to use in which context. Equipped with cultural variety and the rules of relevance, a person can navigate successfully in many settings" (p. 224).

Studies of individuals' employment of specific cultural frames—interpretive resources—paint a similarly positive picture of the consequences of repertoire diversity. For example, in his study of Indian marriages, Derné (1995) observed that by combining and manipulating different cultural frames, individuals defended their choice of marital partner to others. Lamont's (2000) respondents employed varied frames to defend their sense of social honor. Swidler's (2001) study of middle-class Americans showed individuals drawing on a variety of cultural resources to resist challenges and to legitimate their marital relationships to themselves and the interviewer. McLean (1998) found that Renaissance patronage-seekers employed certain socio-historically resonant cultural frames in their letters, and used different elements in different situations; he posited that they did so strategically in order to depict themselves as credible and sympathetic. Research that only implicitly invokes the repertoire concept suggests similar benefits (e.g., Blair-Loy [2003] argues that mothers "crafted new definitions of children" as a way to come to terms with the limited time they were able to spend with their children).

It is important to note that the designs of these studies cannot actually test the effects of having multiple relevant framings with which to explain and make sense of one's actions. However, they do suggest that a systematic evaluation of individual repertoire diversity would show that it predicts greater social and subjective wellbeing. These varied studies indicate that being able to deploy a variety of relevant cultural resources affirms respondents' sense of their decisions, practices or outcomes as sensible and defensible. Being able to justify their actions appears to reinforce individuals' satisfaction with their current statuses and practices, and is tied

to their effort to deter or neutralize criticism (Blair-Loy 2003; Derné 1995; Swidler 2001; Vaisey 2009).[56]

Some studies, however, suggest that in the realm of behavior cultural repertoire diversity may not have an unambiguously positive effect. A longitudinal, mixed-methods study, for example, found no relationship between adolescents' articulated justificatory frames and their later actions, suggesting that the core effect of such cultural tools is rhetorical (Vaisey 2009). A study of the cultural repertoires available in poor neighborhoods found that "cultural heterogeneity" in fact handicapped young residents in reaching their stated life goals. Harding's (2007, 2010) analyses of AddHealth data showed that there was a weaker relationship between youths' goals and their behaviors for those in more culturally heterogeneous neighborhoods than for those in less. His ethnographic work suggested three underlying mechanisms. Exposure to multiple contradictory, legitimate cultural models that prescribe different life paths undermined goal-attainment first by encouraging *model shifting*, or "weak commitment to cultural models" (156). Second, Harding identified the problem of *dilution:* heterogeneous cultural models means that (a) fewer community members have achieved any one of them, and (b) competing perspectives trouble individuals' understandings of these models. Dilution leaves individuals with less, and less accurate, information with which to pursue a given cultural model (pp. 157-8). Third, cultural heterogeneity creates problems of *simultaneity*, in which individuals hold multiple cultural models at the same time that can confuse, paralyze, and overwhelm individuals as they attempt to "[take] action or [make] decisions" (p. 158). Though Harding theorized these as informational and behavioral effects of neighborhood repertoire diversity, they could very well result from individual repertoire diversity as well. Moreover, Harding's study, while innovative, had a serious limitation: it could not separate out the effects of cultural diversity, itself, from the effects of the specific cultural resources (e.g., norms) that comprise it. The poorest neighborhoods in Harding's study indeed offered youth more diverse models of behavior than did less-poor neighborhoods, but largely by adding non-normative cultural models, which conflates the effects of the *variety* of cultural resources with those of the *content* of cultural resources.

Select research from social psychology also indicates that multiplicity within an individual's repertoire might have undesirable cognitive and emotional effects. Festinger's (1957) classic work on cognitive dissonance suggests that having contradictory ways of understanding the world—inconsistencies within one's "knowledge, opinion or belief about the environment, about oneself, or about one's behaviors"—would cause psychological discomfort (p. 3). Applied to an interpretive context, Schwartz's (2004) "paradox of choice" suggests that having greater repertoire diversity could hamper individuals' selection of any given cultural tool, and could depress satisfaction with its selection and deployment.[57] And the social psychological theory of counterfactuals suggests that awareness of alternative outcomes that are perceived as having been possible, and having been possibly more desirable or legitimate, fosters dissatisfaction with the outcome one did obtain (Medvec, Madey and Gilovich 1995). Individuals are primed to consider "what might have been," and their reactions are "proportional to how easy it is to conjure up greater

[56] Beyond the Swidlerian toolkit, the interpretations that social actors bring to bear on their daily lives have been theorized as the medium of social interaction (Cooley 1956; Goffman 1959), and as the very foundation of social life (Berger and Luckman 1966; Schutz and Wagner 1970).

[57] Schwartz (2004) originally refers to individuals choosing among of objects, but the mechanisms and experience underlying selection may be similar for objects and interpretive frames.

or lesser outcomes that 'almost happened'" (p. 603).[58] A variety of competing frames, then, might function in an individual's mind as a menu of outcomes or standards that were possible but unachieved.

Attending to such cognitive effects, then, as DiMaggio (1997) urges, reveals a previously unarticulated tension in cultural sociology. Having a more diverse cultural toolkit—here, familiarity with a range of opposed opinions on pregnancy, birth and infant care—may help new mothers by providing them with an assortment of frames with which to interpret, make sense of and approach the challenges that they face. Alternately, such familiarity might serve to make any given outcome less satisfactory because of the disenchanting effect of competing perspectives and outcomes (Medvec, Madey and Gilovich 1995; Schwartz 2004); or it might even dilute individuals' certainty in identifying which outcomes are legitimate or desirable (Harding 2007). The cognitive effects of holding in one's attention multiple and conflicting frames may not be beneficial after all (for more on this, see Baird, Le and Lucas 2006; Collier 1997; Donahue et al. 1993; Gergen 2000 [1991]; Giddens 1991; Keniston 1960).

Recognizing that repertoire diversity could have positive *or* negative effects depending on the context, I hypothesize that *the greater an individual's cultural repertoire diversity, the better her subjective outcomes will be.*

To test this hypothesis, I measure repertoire diversity as a set of interpretive resources in a specific, bounded social context: the diversity of frames a woman employs to interpret (evaluate, understand, make sense of) practices and events in pregnancy, childbirth, or early parenting. These frames are particularly useful as they capture both the "instrumentalist" and "interpretivist" aspects of culture (McLean 1998).[59]

The best setting for testing the effects of interpretive frame diversity is one in which (a) respondents confront similar experiences and timelines, (b) a variety of competing logics and practices coexist, (c) respondents identify and invest in particular plans and ideals, and (d) exogenous shocks frequently disrupt these envisioned plans. The period during which women are pregnant with, bear, and begin to raise their babies fulfills precisely this set of criteria. Childbirth and early parenting test the effects of cultural repertoires because they present individuals with *problems* to which they must respond symbolically, if not practically.[60] These novel experiences require women to make sense of their experience to themselves and sometimes to others. This

[58] A classic example of this is Medvec et al's (1995) discovery that in the Olympic Games, silver medalists are in fact less happy with their achievements than are bronze medalists, even though their outcome is "objectively" greater. The silver medalist's reference point (her "most compelling counterfactual alternative") is the gold medalist, whose place was achievable, desirable, and who ultimately represents what could have been. The bronze medalist on the other hand has as a reference point not the gold medalist, who is further removed, nor the silver medalist, whose position is not as desirable as the gold medalist, but instead those who did not make it to the medal podium at all. Because the bronze medalist's counterfactual alternative is both possible and considerably less desirable, she is therefore more satisfied with her performance then is the silver medalist.

[59] "The notion of framing is useful because it spans instrumentalist and interpretivist connotations of culture, implying both negotiated meaning and the strategic direction of resemblances and exemplars relevant to constructing a particular context for action" (McLean 1998, p. 55).

[60] In the perinatal period, some of the problems mothers face cannot be acted on in a practical sense. A mother who wanted a "natural" birth but experienced a heavily medicated delivery, for example, can do nothing to change it postpartum. Her potential symbolic recourse, instead, is to interpret it, reframe it, and make sense of it to herself and others. New problems are an important focus around which to orient this study as they compel individuals to engage in the kind of explicit, verbalizing mode of thought that calls on sense-making tools. (See DiMaggio's [1997] discussion of deliberative thought, pp. 271-2; D'Andrade 1995; Vaisey 2009.)

provides a meaningful test of the degree to which repertoire diversity helps individuals to resolve new challenges. The resources new mothers have to evaluate, make sense of and justify their actions, then, have potentially important consequences.

Postpartum depression, affected by biological factors (hormonal, fatigue), by relational factors (marital status, infant temperament), and especially by individuals' cognitive assessments (of their chlldbirth experience, bond with child, level of social support; Miller 2002; Ross et al. 2004), is an appropriate indicator of such repertoire effects. I therefore use the incidence of PPD symptoms as the dependent variable in the analyses below.

DATA & METHODS

I collected several types of data concerning the frames that new mothers know and deploy. First, to develop the original Cultural Heterogeneity survey module, I conducted observations of prenatal/new mother classes as well as over a dozen expert interviews with obstetricians, midwives, labor and delivery nurses, and birth coaches (*doulas*). Next, with a collaborating medical research team, I collected longitudinal survey data in a variety of care settings representing different institutions and communities; these are described below as they are the key data used in this paper. Finally, I conducted longitudinal in-depth interviews with a subset of 67 survey respondents that I draw on here exclusively to interpret and contextualize statistical findings.

Along with my collaborators, I recruited pregnant respondents from five Northern California hospital-based clinics (two public, three private), two free-standing community clinics (one public, one private), an online parenting email group, and a home-birth email group.[61] The respondents completed up to three self-report surveys as they transitioned from pregnancy through 2-3 months postpartum. Two of these surveys—one before birth (ante-natal), one after (post-partum)—were designed to collect information on respondent preferences regarding mode of delivery, as well as demographics, obstetric history, experience of childbirth, and postpartum depression symptoms. A second ante-natal survey, which I designed, contained the Cultural Heterogeneity (CH) measure as well as measures of social network diversity, social support, personality, and other constructs.[62]

The sample is not statistically representative of the California Bay Area. Instead, we carried out purposive sampling in order to represent women who were receiving care at diverse institutions and who had a wide range of social, educational, and material resources; these patient populations differ in theoretically interesting ways (Small 2009). Out of the over 300 pregnant women who began the CH survey, 225 had complete data on it and the important covariates. And of these, 119 also had complete data from the postpartum survey, which provides the dependent variable for the analyses here. This longitudinal sample is substantially smaller than the ante-natal-only sample largely because of constrained survey administration opportunities at our largest public hospital site, not because of widespread voluntary respondent dropout. The longitudinal sample represents respondents from a range of racial/ethnic backgrounds, educational achievement levels, and maternal statuses, but, like much research on motherhood, it skews heavily toward privileged White women. This limits variation in the sample and so constrains the explanatory power of

[61] Survey data were collected in collaboration with a medical research group at a regional medical school, as well as seven apprentices participating in an undergraduate research apprenticeship program at the study author's institution.

[62] One pre-birth and one post-partum survey were designed by the collaborating medical research team. The second pre-birth survey was designed by the study author and fielded for pilot testing by undergraduate research assistants.

measures like education, race/ethnicity and insurance type. See Table 1 for descriptive characteristics for all respondents with data on the CRD measure, as well as for the sample of respondents that have complete longitudinal data.

Measures

Dependent variable: Postpartum depression. The post-partum survey featured the Edinburgh Postnatal Depression Scale (0 - 30), a well-established measure that is considered one of the best survey-based instruments for identifying women who have or are at risk for postpartum depression (Cox, Holden and Sagovsky 1987; Sharp and Lipsk 2002). The instrument asks the respondent to rate how often or how much a series of statements are true of themselves in the past week. Examples include "I have been able to laugh and see the funny side of things" (reverse-coded), "I have blamed myself unnecessarily when things went wrong" or "I have been so unhappy that I have been crying." The scale is typically used to determine whether women score above or below a community-specific threshold that would indicate a need for treatment or intervention. Cut-off points are often 10 or above for identifying "minor or major" depression and 13 or above for identifying "major" depression (Cox, Holden and Sagovsky 1987; Gaynes et al. 2005; Gibson et al. 2009), but thresholds vary considerably between studies based on population and site characteristics and time since giving birth (Alvarado-Esquivel et al. 2006; Chaudron et al. 2010; Eberhard-Gran et al. 2001). Due to the low incidence of diagnosable PPD in the U.S. population (approximately 13%; Le Strat, Dubertret and Le Foll 2011; O'Hara and Swain 1996) and the small size of the sample analyzed here, I use the continuous PPD score as the outcome measure.[63]

Independent variables and controls[64]

Cultural Repertoire Diversity. In the CH survey I measured the diversity of frames the respondents had available to interpret (evaluate, understand, make sense of) practices and outcomes specific to pregnancy, childbirth, or early parenting. These are the types of cultural "tools" that are most consistently measurable[65] and that feature most prominently in scholarly representations of the literature.

I drew on six months of pilot fieldwork to develop the survey items. The module presents the respondent with a series of 29 different frames ("opinions") relevant to specific pregnancy-, childbirth-, or parenting-related practices (e.g., "That, all in all, epidurals are good for birthing women," "That it is OK for a pregnant woman to drink a glass of wine or beer every now and then," "That babies should be fed whenever they seem hungry.").[66] For each one the respondent

[63] This construct is more appropriate for my sample; respondents were from one to several months post-partum when they took the post-partum survey, which makes a single PPD cut-off inappropriate. The full scale provides a more informative variable on which to regress the predictors of interest, as analyses of the dichotomous measure generate information only about those who surpass the cut-off.

[64] I did not include age in these analyses. The age variable had considerable missing data, did not contribute substantively to the origins models, and did not predict postpartum depression in the effects models. Moreover, the degree to which it could relate to postpartum depression—through higher likelihood of birth complications—is directly measured by the birth complications variable.

[65] These "interpretive frames" were easy for the respondent to recognize as familiar or not—they are much more superficial and recognizable than are deep cognitive schemas or worldviews—and therefore lent themselves well to a survey format. Indeed, such frames or lenses may be one of the most measurable aspects of the cultural repertoire, as embodied styles, skills of self presentation, etc., likely require ethnographic study across a variety of interactional contexts.

[66] Note that this measure of the cultural repertoire is grounded in a very particular socio-historical context. Based on the six months of ethnographic fieldwork I conducted in 2009, this variety of interpretive frames is specific to the

is asked if she is familiar with the opinion; from what source(s) she had heard it (social contact, institutional and media); and what she thinks about it (*strongly agree* through *strongly disagree*). Each opinion item is part of one of 12 sets of two or three opposed statements that are scattered randomly throughout the list of 29. (E.g., there is both "All in all, epidurals are *good* for birthing women," and "All in all, epidurals are *bad* for birthing women." See Appendix A for more information.)[67] Familiarity with multiple linked opinions then indicates respondents' exposure to mutually exclusive frames.

For each respondent, I calculate a Cultural Repertoire Diversity (CRD) score. The CRD score represents the degree to which respondents have been exposed to opposing frames about a specific phenomenon. It is designed to measure the *diversity* of frames to which the respondent has been exposed, thereby operationalizing having diverse—that is, meaningfully different—interpretive tools that one could employ for a given problem.[68] The *content* of the frames is crucial for mapping this diversity but is not central to the analysis itself. (For analyses of CRD content, see Garrett 2013a)

I calculate the score by subtracting 1 from the number of frames the respondent knows within each of the 12 sets in order to indicate the presence of *opposing* frames. If the respondent knows none or one of a set, she gains 0 points on the score. (Knowing only one within a set means one does not know any opposing frames about that particular topic.) If a respondent knows two frames in a set, she would gain 1 point; and if she knows three frames in a three-item set, she would gain 2 points. These set-based scores are all added together (range 0 - 17). CRD score is the focal independent variable in this paper.

In analyses not presented here, I have found that CRD score varies significantly across social groups and resources (Garrett 2013b). Educational achievement and social network diversity, for example, independently predict higher repertoire diversity. See Table 2 for mean CRD scores for different subgroups in this sample.

Insurance type. Postpartum depression is more likely among women who experience significant life stresses. Missing data about household income and inconsistent information about household size made these poor indicators of economic resources or hardship. Instead, I use information on the type of insurance the respondent had for prenatal and birth care. These data come from either respondent reports or from the type of clinic the respondent attended, with use of a public clinic a proxy for receipt of Medi-Cal, California's public health insurance coverage for low-income pregnant women. Note that some women with Medi-Cal received care in private clinics because of their or their fetus's medical needs.

Childbirth experience. Two variables describing the respondent's experience are included because they are associated with individuals' likelihood of experiencing post-partum depression.

---

context of contemporary childbirth education, prenatal care, and new mother support provided to women across socioeconomic strata in this particular region.

[67] There are many other behaviors and outcomes in the transition to first-time motherhood that might have been good candidates, but which were excluded because there were not concise, mutually exclusive frames with which to match them. Other items were excluded because they overlapped considerably with the questions about birth that were asked in the accompanying medical research surveys.

[68] The instrument's focus on respondent *exposure* to these interpretive frames is consistent with the position that coming into contact with a new cultural resource shapes individual practices and perspectives independent of one's acceptance or rejection of it (Swidler 2001).

Birth complications is a binary variable indicating whether the respondent reported yes to the question, "Did you experience any complications with this delivery?" *Satisfaction with birth* is a measure from the postpartum survey in which respondents marked on a scale of 1 to 10 how satisfied they were with their childbirth experience.

Social support. A well-established predictor of postpartum depression, social support was measured using a shortened version of the International Support Evaluation List (ISEL) (Cohen and Hoberman 1983).[69]

Education is measured as having completed one of three levels of schooling: some college or less; completed college; and completed graduate school. Despite dedicated attempts to recruit a broader sample, a majority of the respondents have a college or graduate degree. This skew in the distribution of education modestly constrains its explanatory power in analyses.

Respondent race/ethnicity is included in the models because it is correlated with the incidence of postpartum depression. It is comprised of six self-report categories that I collapsed into three for regression analyses in order to preserve all of these respondents in the models: (1) Asian American or Pacific Islander; (2) White; and (3) African American/Black, Hispanic, multi-ethnic or other.[70]

Social network diversity. A customized "position generator" measure indicates respondents' access to individuals employed across a broad range of occupations (Lin, Fu and Hsung 2001).[71] Network diversity among respondents' female contacts is employed in supplemental analyses because it is more relevant than male or mixed-gender networks for this social context (Garrett 2013b; scale 0 - 14).

Whether the respondent has been the mother of an infant before ("*maternal status*") is included because research indicates that behaviors in and experiences of the transition from pregnancy to parenting vary substantially by maternal status. I also include as a control a measure that indicates the number of months from when a woman gave birth to when she took the postpartum depression survey ("*PP survey lag*"), as the incidence and intensity of postpartum depression diminish over time. Finally, I include variables indicating *relationship status*, as being single is a predictor of postpartum depression (Beck 2002).

I also include measures of two personality constructs that are relevant to repertoire deployment and postpartum depression incidence: *openness* and *neuroticism*.[72] These were measured using a short "Big Five" personality instrument (John and Srivastava 1999; Rammstedt and John 2007).[73] Individuals high in openness are more able to adjust their beliefs (John 1990),

---

[69] The full ISEL was too long to incorporate into the survey. The 12-item subscale used in the first pre-birth survey is similar to existing shorter versions of the ISEL that have been shown to have adequate to good internal validity.

[70] No respondents reported being Native American.

[71] There are many ways in which social networks can be diverse. Here I am using occupational diversity as a proxy because it signals respondents' exposure to people in different social locations more directly than does ethnicity- or age-based diversity, for example. Moreover, this choice allows my findings to be in dialogue with relevant studies like Erickson (1996).

[72] The other three items in the "Big Five" personality instrument—conscientiousness, agreeableness, and extroversion—were also measured and analyzed (see Table C1 in Appendix C), yielding similar results to models that contained only openness and neuroticism. Because the other three personality items were not as theoretically relevant to the analyses as openness and neuroticism, the models including them are not discussed here.

[73] The short instrument is comprised of two questions for each of the "Big Five" personality constructs (Rammestedt & John 2007). Because openness is such an important construct for this study, I included two additional indicators of this construct in the instrument. The additions are drawn from the original 44-item measure

consider external information (McCrae and Costa 1987), and "positively reappraise" a situation as a coping response to problems (O'Brien and DeLongis 1996). Neuroticism "predisposes people to experience negative affect" and is predictive of depression in pregnant women and in the general population (Bagby et al. 1995; Bunevicius et al. 2009; DeNeve and Cooper 1998; Hayes and Joseph 2003).[74]

Analytic Plan

The following analyses were performed using the STATA 11 statistical software platform. I conducted ordinary least squares regression and zero-inflated negative binomial regression, using the cultural repertoire diversity measure to predict respondent score on the postpartum depression scale. ZINB is an appropriate statistical model to apply to the continuous PPD outcome as there is a high concentration of respondents at the low end of the scale.[75] Analyses comparing ZINB and OLS regressions with the full model reveal similar patterns between the independent variables and the dependent variable, with similar levels of statistical significance. The zero-inflated model indicates that higher scores on the CRD measure predict both not having a score of zero on the PPD measure, and having a higher score on the PPD measure, compared to respondents with lower CRD scores. In light of these similar findings, the following interpretations refer to OLS regression, whose estimates are more straightforward to communicate.[76]

In all of the analyses, "Completed graduate school" and "White" are the reference categories for education level and race, respectively. "Married" is the reference category for relationship status variables.

FINDINGS

Describing Cultural Repertoire Diversity in the Sample

Familiarity with the opinions that comprise the index varied substantially, from less than 3% of the sample who had ever heard that it was more appropriate to breast-feed either boys or girls than the opposite sex, up to 100% who had heard that breast milk was better than formula for infants. Of the sets comprised of three opposed frames, those concerning drinking while pregnant, physical activity and the superiority of breast milk versus formula are best known.[77] Of the sets comprised of two opposed frames, those regarding flexible versus structured feeding practices, the subjective experience of pregnancy, the compulsory or optional character of breast-feeding, and the evaluation of epidural use were best known. In general, these mirror the issues and frames most often found in media representations of pregnancy and childbirth and in public health campaigns.

(John and Srivastava 1999). The long and short measures of openness perform similarly in analyses. I have employed the longer version in this paper.

[74] The dataset unfortunately does not collect data on all of the constructs that have been found to predict postpartum depression: past depression, romantic relationship quality, childcare stress and infant temperament, in particular (Beck 2001; Beck 2002). However, there is little reason to suspect that these predictors would be related to CRD, and so should not constrain the conclusions I can derive, below.

[75] For more information about the technique, see http://www.stata.com/support/faqs/stat/nbreg.html.

[76] ZINB coefficients refer to the logged score of the dependent variable, which makes the regression tables less easily "legible" than those of OLS regressions.

[77] For example: "That breast milk and formula are *equally good* for infants;" "That *breast milk* is better than formula for infants;" and "That *formula* is better than breast milk for infants."

The repertoire diversity scale has a possible range of 0 to 17. In the sample of nearly 300 respondents with complete data on the measure, the observed range was 0 to 15; of the respondents with complete data for the analyses presented here, the range was 0 to 13 and the mean score was 6.22 (SD = 3.00). CRD score correlated positively with scores of greater social status and resources (education, white race, private insurance, age), and information seeking practices (reading online, volume of reading online, and, marginally, taking a childbirth class). It correlated negatively with being African American, multiracial/"other," or (at marginal significance) Asian; and having public health insurance.

Effects of a Diverse Repertoire

Most contemporary women do not fulfill the aspirations they have developed for their labor, delivery, or the early postpartum period (Declercq et al. 2008; Kelleher 2006; Nelson 2009). These "failures" often occur with respect to especially cherished goals; some common examples from my interviews were having a "natural" birth, feeling an instantaneous bond with one's infant, or exclusive breastfeeding. New mothers in these cases must confront their unrealized wishes and navigate a response. As the "spoiled" events are often beyond the mother's direct control,[78] women's most available response is typically symbolic. Like others who have suffered a loss, these women have the opportunity—or, possibly, compulsion—to interpret the outcome in a way that makes it feel acceptable and even legitimate. For example, in interviews, many women who believed, pre-partum, that breast-feeding would come naturally and easily were disappointed and confused to find it extremely challenging. Some made sense of this by shifting from the frame that it is "natural" and therefore an easy or instinctual process to a frame that breast-feeding, like other aspects of caring for an infant, is a relational endeavor that is challenging, evolving, and unique to the mother-infant pair. Such meaning-making has been shown to be an especially important factor for easing suffering following a loss (Davis, Nolen-Hoeksema and Larson 1998; Holland, Currier and Neimeyer 2006).[79] In this section, then, I ask whether exposure to diverse frames relevant to the perinatal period leads to better socio-emotional outcomes for mothers.

HYPOTHESIS 1.—*Higher CRD score will predict better subjective outcomes in a novel, challenging context.*

As described above, I operationalize wellbeing in a novel, challenging context as new mothers (low) incidence of postpartum depression symptoms on the EPDS. The average score of the respondents in these analyses is 5.76 (SD = 3.90). This is well below the conventional diagnostic cut-off scores for identifying minor or major depression (10 or above, which described 16 percent of the sample), or for major depression (13 or above, which described 4.2 percent of the sample; Gaynes et al. 2005). New mothers reported more frequent PPD symptoms than did their more experienced counterparts (5.98 vs. 5.48), as did more educated mothers (5.02 for some

[78] An undesired cesarean, for example, cannot be changed after the fact.

[79] There is a sizeable body of research in clinical and social psychology on the processes and benefits of individuals' "creation of meaning" or "sense-making" in recovering from loss. See for example Clark (1989), Davis et al (1998), and Holland et al (2006), who describe the sense-making process as the individual's ability to make a loss comprehensible: "the… capacity to find some sort of benign explanation for the seemingly inexplicable experience" (176). Holland et al found this ability to be a robust predictor of coping.

college or less, 5.56 for those with college degrees, and 5.98 for those with graduate degrees), but these differences were not significant at the 0.05 level.[80]

Table 3 presents OLS regression estimates for models that contain demographic predictors (Model 1); predictors that are sometimes referred to as "nonbiological" or psychosocial, subjective and experiential factors (Model 2); key personality trait measures (Model 3); and the combination of these three sets (Model 4). Demographic predictors are not significantly different from the omitted categories (graduate degree, white race, married, experienced mother, private insurance), and together they explain about 8% of the variation in the dependent variable. Model 2 shows that having a birth complication—an outcome reported by over one-third of the sample—corresponds with a postpartum depression score that is modestly higher, but not significantly higher, than that of respondents without a birth complication, holding the other variables constant. In contrast, social support significantly lowers postpartum depression. In Model 3, neuroticism and openness together explain 17% of the variance in PPD score. The detrimental effect of neuroticism is approximately twice that of the protective effect of openness. In Model 4, neuroticism maintains its effect, and only two other variables are even marginally significant: being Asian American/Pacific Islander, which predicts higher PPD score than does being White, and level of respondent satisfaction with labor and delivery, which is inversely related to PPD. Respondents who reported high satisfaction have lower PPD than respondents who reported low satisfaction.

Model 5 includes Model 4 measures *plus* the cultural repertoire diversity measure. The addition of CRD to the model modestly increases the effects of some of the measures from Model 4, suggesting that they had been artificially depressed by their unmeasured association with CRD level. Most of these measures' coefficients—both those that are significant (satisfaction with childbirth, neuroticism) and those that are not (e.g., being in the lowest education category instead of the highest, being single instead of married, being a first-time mother, and having had a birth complication)—have the expected relationship to the PPD measure. Others, however, yield unexpected results: respondents with public health insurance have lower PPD scores than do those with private insurance.[81] Model 5 explains 32% of the variance in postpartum depression.

The CRD measure has a significant effect in Model 5 but, contrary to the hypothesized expectations, it predicts *higher* PPD scores net of the other well-established predictors.[82] Each increase on the cultural repertoire diversity scale predicts an increase of 0.285 on the postpartum depression symptom scale. Holding all the other covariates at their observed values, the respondent

[80] The link between education and postpartum depression is complex. Scholarship has linked lower educational achievement to greater risk of poor mental health (e.g., Patel et al 1999, in low- and middle-income countries) and higher incidence of postpartum depression (Righetti-Veltema, Conne-Perréard, Bousquet, and Manzano 1998, in Geneva). However, a large meta-analysis of postpartum depression risk factors found education unrelated (O'Hara and Swain 1996), and other scholars have found that the particular construct of perfectionism that most increases risk of postpartum depression (Gelabert 2012, in Spain) is more common among individuals with higher educational achievement (Parker and Adkins 1995, on university students).

[81] As past research has found that individuals experiencing life stresses are more likely to experience postpartum depression, public insurance receipt may here be capturing other associated and unmeasured factors that protect against postpartum incidence. For example, when a particular personality measure is added to the model ("conscientiousness," which diminishes PPD symptoms; see Table C1 in Appendix C), the public insurance variable becomes non-significant. The respondents with Medi-Cal coverage who completed the longitudinal survey sequence may have been higher in conscientiousness than were their counterparts with private insurance who did the same.

[82] The CRD effect is similar in the presence of varied combinations of the "Big Five" personality variables, as well (Table C1 in Appendix C).

with a CRD score of zero would have a predicted postpartum depression score of 4; a CRD of 6 (close to the sample mean) would correspond to a PPD score of 5.70; and 16, a score near the CRD maximum—though not one found in this small sample—would predict a PPD score of 8.55. The expected postpartum score, then, more than doubles from the bottom of the CRD scale to the top—approaching a classic cut-point for "possible depression"—even when controlling for numerous important covariates. These differences are significant between high and low levels of the scale. These patterns are similar for new and experienced mothers.

Women who, before giving birth, are familiar with a wider variety of ways of interpreting events found in pregnancy, childbirth and early parenting thus report more postpartum emotional and mental distress than do their counterparts who were familiar with a less diverse variety of these frames. These analyses show that cultural repertoire diversity explains postpartum depression incidence better than do many classic predictors of the ailment. The standardized effect of CRD, for example, is in fact greater than (and counteracts) the effect of social support—an individual-level characteristic that has long been identified as a protective factor against postpartum depression. I consider potential explanations for these findings in the Discussion section.

Supplementary Analyses

To better interpret the results from Hypothesis 1, I conducted supplemental analyses to distinguish toolkit composition effects from those of a particular tool. This would further clarify the effect of repertoire diversity from repertoire content. Arguably, the most relevant tool for justifying or symbolically "repairing" ruptures to one's desired childbirth experience is the frame, "That it is common for women to have serious complications during labor and delivery" (*common*). In the ante-partum survey, 28% of the respondents reported that they were familiar with this frame. Extrapolating from the premises of cultural repertoire theory, knowing this frame should have helped respondents to make sense of and cope with childbirth experiences that deviated from their expectations. This effect should have been especially pronounced for the one-third of respondents in this longitudinal sample who reported having a complication, as they would have experienced the problem for which this is the most appropriate symbolic "patch." A medical complication is undesirable, no matter what, but it is perhaps less distressing—and certainly less attributable to the mother herself—if it befalls many women.

HYPOTHESIS 2.—*Mothers who know a particularly relevant and reassuring frame have lower PPD.*

As shown in Table 4, knowing this interpretive frame does, indeed, predict less postpartum depression. Respondents who were, during their pregnancies, familiar with this cultural frame later had PPD scores that were on average 1.886 points lower than those who were not, controlling for the other characteristics in the model. Knowing this frame is actually more powerful (in a protective sense) than is a standard deviation change in neuroticism score—a personality trait highly predictive of postpartum depression. And, with this most apt "repairing" frame regressed independently on postpartum depression—effectively removing its influence from the CRD measure—the detrimental effect of cultural repertoire diversity in fact intensifies. For each one-unit increase on the CRD scale in Model 5 (Column 1), the effect on PPD was 0.285; this coefficient increases to 0.404 once *common* is included independently in the model (Column 2). Having the right "tool for the job," then, decreases postpartum depression symptoms, whereas general frame diversity increases them. Thus, both the content and number of different frames matter, though in different ways.

In analyses not shown here, I interacted *common* with the incidence of a birth complication, the circumstance in which this interpretive tool would most likely be deployed. However, the interaction term was not significant; having had a complication does not significantly moderate the effect of *common*. Both women with and without complications who were familiar with the "common" frame were better off (PPD = 4.48), than were their counterparts to whom the "common" frame was unfamiliar. Among women who did not know the *common* frame, those who had had a birth complication were worse off (PPD = 6.92) than were women who had not (PPD = 5.99, $p = 0.059$).[83]

DISCUSSION

The analyses presented above show that cultural repertoire diversity—operationalized here as diversity in interpretive frames during pregnancy—can be measured via a relatively simple survey instrument. Contrary to expectations derived from most cultural sociological work on the topic, the analyses reveal that greater cultural repertoire diversity *diminishes* individual socio-emotional well-being. Having available a reassuring cultural frame, in this case the belief that it is "common" for women to have complications during labor and delivery, however, is protective against postpartum depression. Ultimately, this paper shows that both the content and diversity of individuals' cultural frames matter, and in different ways—insights that other studies in this field have not definitively shown. These findings also raise important new considerations for maternal care, and they may partly explain the well-documented rise in the (especially middle-class) experience of motherhood as anomic and fraught with cultural contradictions (Hays 1996; Miller 2007; Stearns 2003; Warner 2005).

I found that women familiar with a wide variety of ways of interpreting events found in pregnancy, childbirth and early parenting went on to experience more symptoms of emotional and mental distress than did their counterparts familiar with a less diverse set of these frames. Such cultural repertoire diversity predicted greater postpartum depression even when controlling for relevant factors like personality traits, social support and subjective experiences. However, knowing a single especially reassuring and relevant frame—that birth complications are "common"—had notable protective effects for all respondents.[84] Compared to their counterparts, women who were familiar with the "common" frame were doing better emotionally—perhaps because they felt better about their births—whether they had complications ("Well, this is something that happens to many families…") or not ("Even if it wasn't perfect, at least I wasn't

[83] Note that these scores were not significantly different at the 95% confidence level.

[84] If mere exposure to these frames shapes well-being so demonstrably, it is quite reasonable to suspect that they influence behavior as well. Vaisey (2009) found that the varied, inconsistent frames youth used to discuss their moral decision-making in interviews had no statistically significant relationship to their later behaviors. His study did not, however, assess the full complement of relevant frames available to these individuals, which leaves open the possibility that his respondents' behaviors may have indeed been influenced by their (unmeasured) collection of cultural resources.

Having had a birth complication does not significantly moderate the effect of repertoire diversity on postpartum depression either. Predicted scores show that at every value of the CRD range women who had a birth complication have a non-significantly higher PPD score than women who did not. However, women on the lower end of the CRD scale who had birth complications in fact have *lower* PPD scores then do women who did not have birth complications who CRD scores are closer to the top. At the most extreme values, these scores are significantly different.

one of the many who had a complication…").[85] And the inclusion of the "common" frame in regression models made the repertoire diversity measure even more predictive of postpartum depression. These analyses distinguished the effects of repertoire content from the effects of repertoire diversity in two ways, a move that overcomes the limits of Harding's (2007, 2010) landmark study.[86]

Together, these findings suggest several ways in which cultural frame diversity could negatively affect individual socio-emotional well-being. First, the results indicate that cultural resources such as interpretive frames may function less as tools individuals use to "solve" problems, and more as reference points against which to compare their experiences.[87] Instead of being a fundamentally helpful set of resources, benign in the toolkit until deployed in an instrumental strategy of action, this repertoire of contradictory frames may function as a variety of salient alternative practices and ideals that the individual must consider. Indeed, diversity among the more ideological frames could create on a micro-social level the kind of "unsettled" context in which individuals most need clear, internally consistent cultural models in order to act (Swidler 2001, p. 86). Exposure to such frame heterogeneity—especially that left after a particularly helpful frame is separated out—may replicate on the individual level the kind of socio-cognitive troubles that Harding (2010) found in culturally heterogeneous neighborhoods.

Such diversity of standards, "truths," and practices may be cognitively and emotionally taxing (e.g. as theorized in Festinger's [1957] cognitive dissonance or Schwartz's [2004] paradox of choice, or even in popular "mommy lit" works on motherhood, such as Warner [2005]). To the extent that many of the frames available to new mothers evoke varied "best practices" or ideals regarding a good birth, successful breast-feeding, and instinctive motherhood—ideals that many women do not realize—having a highly diverse repertoire may create dissatisfaction by serving as a set of desirable "counterfactuals" (Medvec, Madey and Gilovich 1995). Theoretically achievable, such alternate outcomes can make one's own feel acutely unsatisfying.

Second, the social contexts of individuals with more or less heterogeneous interpretive frames differ in ways that would affect wellbeing.[88] If an individual has heard only one framing of the effects or legitimacy of a given practice, it is likely that that framing is one with institutional backing (e.g., public health campaign messages about the dangers of alcohol consumption during pregnancy). Such "mainstream," institutionally-supported frames necessarily make up a smaller proportion of the repertoires of those with more heterogeneous frames than of those with less. As a result, individuals with more homogeneous repertoires would likely experience any given frame they know as more supported and legitimate than would respondents with more heterogeneous

[85] It is also possible that such cultural resources function differently, or that individuals call on them differently, based on whether the frames address a past rupture that cannot be changed or an evolving, ongoing problem that the individual is trying to affect. This issue will be addressed in future research.

[86] As discussed above, in Harding's study the effects of cultural heterogeneity were inextricable from those of non-normative cultural models—ones that worked against the mainstream educational and relationship outcomes of interest. Of note, my findings support Harding's conclusions that cultural heterogeneity can be detrimental.

[87] Preliminary analyses of this study's interview data support this interpretation, as well.

[88] Harding's (2010) excellent discussion on p. 156 illuminates how the social context of his respondents interacts with the effects of heterogeneous cultural models. Even though he is describing the plight of adolescents, whom he describes as enmeshed more than other social groups in a "struggle to find their own identities," representations of the often fraught, insecure, competitive, identity-shifting character of contemporary (especially first-time) motherhood (e.g., Fox 2010, Miller 2007, Nelson 2009), suggest that Harding's insights are applicable to this paper's study population as well.

repertoires. Knowing one or fewer frames would also limit the number of practices or outcomes that the individual would recognize as contested or morally charged. Those with multiple opposed frames, on the other hand, would necessarily be aware of such controversies.

These patterns are likely echoed outside of formal institutional contexts as well, given the social network dynamics that underlie variation in repertoire diversity (Garrett 2013b). Having a more or less heterogeneous set of cultural tools reflects (Erickson 1996), reinforces and promotes (Lizardo 2006; Vaisey and Lizardo 2010) a more or less heterogeneous social network. Thus, individuals who know only a limited set of frames are likely in social networks with others with similarly limited sets, creating a web of relationships that affirms the frames known.[89] Individuals with heterogeneous repertoires, on the other hand, are more likely to interact with friends and acquaintances who represent a range of opposed frames. In this context, the individual would experience less reinforcement for—and perhaps a greater need to justify—whatever reference points, standards and practices she pursues.[90]

On several levels, then, having a diverse repertoire of interpretive frames can position individuals to perceive their social context as more fraught, and to feel less satisfaction and legitimacy regarding their own behavior, than would individuals with fewer of these resources. The implication, that having a complex, fragmented, diverse repertoire can burden the individual challenges many assumptions and assertions in the field of cultural sociology.

Limitations

This study shows that at least one key dimension of the cultural repertoire can be systematically measured using a context-specific survey question series. This measure cannot, of course, represent the full range of individual cultural repertoires. Indeed, it measures only the diversity of interpretive frames that women have about one particular context. However, it makes up in methodological leverage what it loses in substantive breadth. More than other types of cultural resources (e.g., styles of speech, habits of self-presentation), interpretive frames are recognizable to respondents and, as such, can be measured via surveys and elicited in interviews. I suggest that the format of this index represents an especially promising way to measure the diversity of individuals' interpretive, domain-specific frames. Future research could potentially employ a set of such context-specific measures as a proxy for repertoire diversity in general.

The finding that repertoire diversity modestly diminishes individual well-being may be specific to the particular kinds of resources measured here. Toward the goal of measuring access to meaningfully different interpretive tools, the CRD instrument also measures exposure to contradictory ideas—an experience with which some contemporary women struggle. Moreover, these interpretive frames likely carry greater moral and ideological meaning than do other types of cultural resources (e.g., styles of self-presentation). For a woman who had a Cesarean section after a protracted effort to have an un-medicated, low-intervention birth, for example, deploying a different frame about the value or appeal of "natural" birth would mean shifting from one normative, emotionally-charged commitment to another (Hulbert 2003; Stearns 2003; Warner

[89] There is mixed evidence that individuals derive more social support from homogeneous and/or denser networks than from heterogeneous, less interconnected networks (e.g., McPherson 2001, House, Umberson, & Landis 1988, Thoits 1995, but see Stokes 1983). Social support is controlled for in all analyses presented here.

[90] In analyses not shown here, I confirmed that adding social network diversity to the models presented here does not significantly change the coefficient of repertoire diversity; unmeasured social network diversity is not driving variation in postpartum depression symptoms.

2005). However, assessing the effects of having a variety of cultural tools with which to symbolically or rhetorically recast one's experience is precisely what the CRD measure allows us to do. It thus provides a key test of one of the premises of repertoire theory. Future work will investigate the effects of CRD scales with more and less morally charged frames to assess how much this aspect of the measure may contribute to postpartum distress.

Finally, this paper does not explore how individuals select among cultural resources, or how they deploy such resources. Though relevant to the processes described above, these problems go beyond the key research questions investigated here. Nonetheless, this paper's findings have implications for cultural resource deployment. Though it has long been thought that environmental, situational or institutional cues trigger the deployment of some resources and not others (DiMaggio 1997; Gamson et al. 1992; Schudson 1989; Swidler 2001), my findings show that both having a reassuring frame available (which protected against PPD) and having a diverse repertoire (which increased PPD symptoms) had significant effects for respondents who faced very different situations: those who did and did not experience a birth complication. This raises new questions regarding the degree to which situational factors can focus or limit individual's deployment of cultural resources.

CONCLUSION

By employing a novel, empirically-grounded measure of cultural repertoire diversity, this paper has shown that the diversity of cultural repertoires meaningfully affects wellbeing. Moving beyond the findings that individuals use frames for discursive and justificatory effects (Derné 1995; Swidler 2001; Vaisey 2009), my analyses reveal that the form and content of new mothers' cultural repertoires influences their mental health. These interpretive frames are key resources with which individuals perceive and make meaning in social life.

The findings presented here raise several questions for cultural sociology. Does diversity in more or less ideological (or "thick" versus "thin"; Abend 2011) frames differ in its effects on individual well-being? What kinds of individuals are more or less able to resist the detrimental effects of individual-level cultural heterogeneity? Might frame and repertoire diversity effects be different for events that are evolving and actionable as opposed to those that cannot be changed (e.g., ongoing breast-feeding struggles versus a past birth complication)? Alternately, in what life situations is it helpful for individuals to have homogeneous or limited repertoires versus heterogeneous repertoires? This paper has taken a modest step in answering questions about how culture "works." The methodological innovations and the findings presented here may enable cultural sociologists to create new content-specific measures with which to study these and related questions.

Tables for Chapter 3

TABLE 1. SAMPLE DESCRIPTION (*N* = 119)

	%	n
Race		
Asian or Pacific Islander	9.2	11
African American	1.7	2
Hispanic	2.5	3
Native American	0.0	0
Caucasian	81.5	97
Multi-ethnic/other	5.0	6
Missing or declined	0.0	0
Educational achievement		
High school or less	1.7	2
Some college	7.6	9
Completed college	30.3	36
Completed grad. school	60.5	72
Missing	0.0	0
Relationship status		
Single	5.0	6
Cohabiting	5.0	6
Married	75.6	90
Missing	14.3	17
Health insurance type		
Public (Medi-Cal)[1]	6.7	8
Private insurance	80.7	96
Insurance data missing	12.6	15
First-time mother	57.1	119
Missing	0.0	0
Birth complications	33.6	40
Missing	0.0	0
	Mean	**Std. Dev.**
PPD score (0-30)	5.76	3.90
Age	33.24	4.62
Ante-natal survey lag (months)		
Post-partum survey lag (months)	2.54	2.10
Social network diversity (0-14)		
Entire network	8.52	2.88
Female network	6.71	2.66
Male network	5.35	2.84
Social support (0-36)	30.48	4.60
Satisfaction with birth (1-10)	8.13	2.35
Neuroticism (1-5)	2.83	0.84
Openness (1-5)	3.85	0.58
CRD score (0-17)	6.22	3.00

TABLE 2. CULTURAL REPERTOIRE DIVERSITY SCORES BY SUBGROUP (*N* = 119)

	Mean	Std. Dev.
Race/Ethnicity		
Asian or Pacific Islander	5.00	2.57
African American	3.5	3.54
Hispanic	7.00	3.46
Caucasian	6.40	3.08
Multi-ethnic/other	6.00	1.41
Educational achievement		
High school or less	4.0	1.41
Some college	3.78	2.54
Completed college	5.89	2.55
Completed grad. school	6.75	3.13
Health insurance type		
Public (Medi-Cal)[1]	4.63	3.07
Private insurance	6.30	2.97
Insurance data missing	6.53	3.14
First-time mother		
Yes	6.61	3.29
No	5.93	2.75
Birth complications		
Yes	6.16	2.88
No	6.33	3.25

TABLE 3. PREDICTING POSTPARTUM DEPRESSION - FIVE NESTED MODELS (OLS)

	(1)	(2)	(3)	(4)	(5)
Education: Some College or less	-0.301			1.646	2.646
	(-0.18)			(1.03)	(1.64)
Education: College degree	-0.285			0.012	0.278
	(-0.35)			(0.02)	(0.37)
Race/ethnicity: Asian/Pacific Islander	1.797			1.967+	2.299+
	(1.40)			(1.66)	(1.98)
Race/ethnicity: Non-Asian/Non-White	-1.117			-0.220	-0.297
	(-0.79)			(-0.16)	(-0.23)
Relationship: Cohabiting	-0.189			-0.682	-0.143
	(-0.11)			(-0.43)	(-0.09)
Relationship: Not married or cohabiting	3.618			1.789	1.964
	(1.56)			(0.84)	(0.94)
Relationship: Data missing	3.150			1.509	0.727
	(0.86)			(0.44)	(0.22)
Maternal status: First-time mother	0.311			0.008	0.217
	(0.42)			(0.01)	(0.30)
Post-partum survey lag (months)	-0.003			-0.048	-0.073
	(-0.02)			(-0.29)	(-0.46)
Insurance: Medi-Cal (Public)	-2.829			-4.287	-4.429+
	(-0.99)			(-1.65)	(-1.74)
Insurance: Data missing	-4.048			-1.466	-0.671
	(-1.06)			(-0.41)	(-0.19)
Had a childbirth complication		0.678		0.589	0.600
		(0.88)		(0.77)	(0.80)
Social support (0-36)		-0.195*		-0.104	-0.077
		(-2.57)		(-1.32)	(-0.99)
Satisfaction with childbirth (1-10)		-0.253		-0.322+	-0.338*
		(-1.65)		(-1.96)	(-2.10)
Neuroticism (1-5)			1.848***	1.645***	1.715***
			(4.72)	(3.82)	(4.07)
Openness (1-5)			-0.950+	-0.645	-0.624
			(-1.67)	(-1.01)	(-1.00)

CRD Score					0.285*
					(2.42)
Constant	5.725***	13.53***	4.191+	9.176*	6.155
	(6.98)	(5.12)	(1.75)	(2.54)	(1.64)
N	119	119	119	119	119
R^2	0.082	0.105	0.170	0.280	0.319

Note.—t statistics are presented in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

TABLE 4. PREDICTING POSTPARTUM DEPRESSION: ADDING THE "COMMON" VARIABLE TO MODEL 5 (OLS).

	(1) Model 5	(2) Model 5 + Common
Education: Some College or less	2.646	2.396
	(1.64)	(1.51)
Education: College degree	0.278	0.105
	(0.37)	(0.14)
Race/ethnicity: Asian/Pacific Islander	2.299+	2.271*
	(1.98)	(1.99)
Race/ethnicity: Non-Asian/Non-White	-0.297	-0.661
	(-0.23)	(-0.51)
Relationship: Cohabiting	-0.143	-0.409
	(-0.09)	(-0.26)
Relationship: Not married or cohabiting	1.964	1.092
	(0.94)	(0.52)
Relationship: Data missing	0.727	-0.144
	(0.22)	(-0.04)
Maternal status: First-time mother	0.217	0.311
	(0.30)	(0.44)
Post-partum survey lag (months)	-0.073	-0.040
	(-0.46)	(-0.25)
Insurance: Medi-Cal (Public)	-4.429+	-3.028
	(-1.74)	(-1.18)
Insurance: Data missing	-0.671	0.130
	(-0.19)	(0.04)
Had a childbirth complication	0.600	0.630
	(0.80)	(0.86)
Social support score (0-36)	-0.077	-0.112
	(-0.99)	(-1.44)
Satisfaction with childbirth (1-10)	-0.338*	-0.317*
	(-2.10)	(-2.00)
Neuroticism score (1-5)	1.715***	1.680***
	(4.07)	(4.06)

Openness score (1-5)	-0.624	-0.552
	(-1.00)	(-0.90)
CRD Score	0.285*	0.404**
	(2.42)	(3.18)
R knew “Common” framework		-1.886*
		(-2.25)
Constant	6.155	6.609+
	(1.64)	(1.80)
N	119	119
R^2	0.319	0.352

Note.—t statistics are presented in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

CONCLUSION

In cultural sociology, cultural repertoire theory has been widely used but its key premises have remained largely unstudied because of the challenges of operationalizing the individual cultural repertoire. In medical sociology, the experience of pregnancy in the United States, and the role of culture in health more generally, has been under-researched. Additionally, much of the research on topics related to women's reproductive lives—pregnancy, birth, breastfeeding—has been limited by its narrow focus on privileged, White women. Finally, much of the scholarship on culture in this field, as well as in public health, is compromised by of the widespread use of measures such as race, ethnicity, or immigrant status as proxies for culture.

This dissertation is a response to these gaps in scholarly knowledge. I developed an original survey module to measure and investigate individual-level cultural resources—here cultural frames (Goffman 1974) and the repertoires of which they are part (Swidler 1986; Swidler 2001). I administered the module as part of a longitudinal survey sequence to a diverse group of expectant mothers in California's metropolitan Bay Area. I then used these data in Chapter 1 to investigate the perspectives of pregnant women, attending to variations across social groups and to individuals' exposure to contradictory information. In Chapters 2 and 3, I transformed the data to measure diversity in these women's cultural repertoires.

Summaries

In Chapter 1, I investigated the "cultural landscapes" of pregnant women in my sample. The analyses indicated divergent—but not radically different—landscapes for more and less privileged women, and indicated that exposure to contradictory ideas about self-care and parenting practices is universal, though greater among highly-educated women. They also revealed a complex relationship between individuals' exposure to and endorsement of specific cultural frames. Investigating these "cultural landscapes" contributes novel data to the study of pregnancy and birth in the contemporary U.S. and enriches the study of culture in health research.

In Chapter 2, I used the CRD score as a dependent variable to investigate what individual level characteristics predicted a more or less diverse repertoire of cultural resources (here, interpretive frames). I asked (a) whether more privileged respondents "consume" a wider variety of cultural resources like these than do less privileged individuals, as has been the pattern for the consumption of cultural products like music; and (b) whether this consumption is related to respondents' social network characteristics, as literature from select sociological subfields would suggest. I found that educational achievement and social network diversity independently predicted repertoire diversity, and that these effects were each moderated by the respondent's status as a new or experienced mother. These analyses reveal a new way in which human and social capital confer cultural resources.

In Chapter 3, I drew on longitudinal data and employed CRD score as an independent variable in order to investigate the effects of having a diverse cultural repertoire on individual well-being. I found, contrary to hypotheses derived from repertoire theory, that women with more diverse cultural repertoires experienced worse postpartum socio-emotional outcomes than did their counterparts, controlling for relevant covariates. Drawing on social psychology, I posited that diverse cultural resources in this context may function less as tools individuals use to "solve" problems, and more as reference points against which to compare their experiences. This paper

overcomes a long-standing barrier to understanding how culture impacts social life; it identifies a previously unrecognized socio-cultural influence on postpartum mental health; and it suggests new directions for the study of culture and cognition.

Contributions

These chapters together make empirical, methodological and theoretical contributions.

Empirical: The dissertation contributes new and nuanced data to the field of research on pregnant women and the sociology of reproduction more generally. These new data can be used by medical practitioners as well as researchers in sociology, public health and women's studies to contextualize extant research on pregnant women's preferences, behaviors and outcomes.

Methodological: The dissertation develops a new way of measuring culture, specifically cultural resources (Swidler 1986), with a survey instrument. The Cultural Heterogeneity instrument designed for this study allows for the systematic, survey-based measurement of individual-level cultural resources and cultural repertoire diversity. It permits for the first time the systematic investigation of the origins and effects of the cultural repertoire. Customized to investigate interpretive frames in the context of the peri-natal period, it can easily be modified and applied to other social contexts as well. This overcomes a methodological and conceptual barrier that has limited the study of individual-level cultural resources and represents a new way to capture multidimensional individual perspectives.

Theoretical: This dissertation advances scholarly understanding of cultural resources in individual lives. Here I list some of the theoretical insights from this collection, approximately in the order in which they were presented. First, these analyses indicate that an individual's exposure to a cultural frame is empirically and conceptually distinct from the individual's feelings about it (Chapter 1). Related to that, mere exposure to cultural frames can affect individuals, independent of their opinions about them (Chapter 3). This highlights the limits of the standard research survey practice of asking respondents only about their opinions. Second, cultural resources are distributed unevenly based on the characteristics of the resource (Chapter 1) and of the individual (Chapter 2). Third, both the content and the form of one's cultural repertoire can affect individual wellbeing (Chapter 3). And fourth, these analyses suggest that in this empirical setting, a diverse cultural repertoire may function more as a collection of reference points against which to compare one's own practices and experiences than a collection of helpful tools with which to act (Chapter 3).

Limitations

This dissertation study has two significant imitations that should be noted. First, the study focuses on only one specific social context: the transition from pregnancy into early motherhood. As suggested by popular debates about motherhood and parenting in the contemporary U.S., our cultural frames on behaviors, options, and outcomes in this realm may be more morally charged, and may therefore exert a greater emotional burden, than might frames in other contexts. The effect of repertoire diversity in the third chapter, for example, may be diminished in other contexts. Second, the sample studied here cannot be generalized to any particular population. Related to this, the data are collected in a region popularly assumed to have views that skew more toward "natural" birth than does the rest of the country. The data presented here may be most useful for its intra-sample comparisons and when complemented by other studies about pregnant women's behaviors, opinions and health outcomes.

Next Steps

There are several ways in which I plan to extend, refine and complement these analyses in the future. First, I plan to conduct additional investigations to better specify how repertoire diversity is affecting postpartum depression symptoms. I plan to make alternatives versions of the CRD scale in order to investigate the effects of more or less morally charged frames, and of frames that refer to actionable phenomena in the postpartum period (e.g., breast-feeding) versus those that have already happened (e.g., birth experience). Also, I plan to integrate interview data into my analyses to better contextualize and advance these analyses. For example, I would like to compare how respondents with very different CRD scores make sense of and recover from difficult births. I also plan to use the interview data to investigate how individuals use cultural resources as they move from expectations for birth, breast-feeding and motherhood to retrospective evaluations of them.

I hope that this study encourages other scholars to investigate similar questions about individual-level cultural resources in other empirical contexts. Only this way can we know if my findings about the origins and effects of a diverse cultural repertoire are similar in the context of contemporary pregnancy as they are elsewhere. Additionally, these findings may encourage scholars to include more multidimensional measures (e.g., both exposure and opinion) when trying to characterize individuals' perspectives. Finally, I hope that scholars in the field of medical sociology and health studies more broadly realize the calls in their fields to improve measures of culture. Instruments like the CH measure that directly assess individual-level perspectives represent one way to realize this goal. These steps would generate more nuanced data on individual perspectives and the outcomes related to them.

BIBLIOGRAPHY

Abdou, Cleopatra M.; Dunkel Schetter, Christine; Campos, Belinda; Hilmert, Clayton J.; Dominguez, Tyan Parker; Hobel, Calvin J.; Glynn, Laura M.; Sandman, Curt. 2010. "Communalism predicts prenatal affect, stress, and physiology better than ethnicity and socioeconomic status." *Cultural Diversity and Ethnic Minority Psychology* 16(3):395-403.

Abend, Gabriel. 2011. "Thick Concepts and the Moral Brain." *European Journal of Sociology* 52(01):143-72.

Alvarado-Esquivel, Cosme, Antonio Sifuentes-Alvarez, Carlos Salas-Martinez, and Sergio Martínez-García. 2006. "Validation of the Edinburgh Postpartum Depression Scale in a population of puerperal women in Mexico." *Clinical Practice and Epidemiology in Mental Health* 2:33-37.

Amnesty International. 2010. "Deadly Delivery: The Maternal Health Care Crisis in the U.S.A.". London: Amnesty International.

Anim-Somuah, Millicent, Rebecca Smyth, and Leanne Jones. 2011. "Epidural versus non-epidural or no analgesia in labour." *Cochrane Database of Systematic Reviews* (12):Art. No.: CD000331. DOI: 10.1002/14651858.CD000331.pub3.

Armstrong, Elizabeth M. 2000. "Lessons in Control: Prenatal Education in the Hospital." *Social Problems* 47(4):583-605.

Avishai, Orit. 2007. "Managing The Lactating Body: The Breast-Feeding Project and Privileged Motherhood." *Qualitative Sociology* 30(2):135-52.

Bagby, R. Michael, Russell T. Joffe, James D. A. Parker, Valery Kalemba, and Kate L. Harkness. 1995. "Major Depression and the Five-Factor Model of Personality." *Journal of Personality Disorders* 9(3):224-34.

Baird, Brendan M., Kimdy Le, and Richard E. Lucas. 2006. "On the Nature of Intraindividual Personality Variability: Reliability, Validity, and Associations With Well-Being." *Journal of Personality and Social Psychology* 90(3):512-27.

Beck, Cheryl Tatano. 2001. "Predictors of Postpartum Depression: An Update." *Nursing Research* 50(5):275-85.

—. 2002. "Revision of the Postpartum Depression Predictors Inventory." *Journal of Obstetric, Gynecologic, & Neonatal Nursing* 31(4):394-402.

Behar, Roxana. 2013. "A Difficult Labor: Race, Gender and Decision-Making in the Delivery Room." Ph.D. dissertation, Department of Sociology, University of California, Davis, CA.

Benford, Robert D., and David A. Snow. 1992. "Master frames and cycles of protest." Pp. 133-55 in *Frontiers in Social Movement Theory*, edited by A. D. Morris and C. M. Mueller. New Haven, CT: Yale University Press.

—. 2000. "Framing Processes and Social Movements: An Overview and Assessment." *Annual Review of Sociology* 26:611-39.

Berger, Peter, and Thomas Luckman. 1966. *The Social Construction of Reality*. New York: Doubleday.

Bernstein, Basil. 1962. "Social class, linguistic codes and grammatical elements." *Language & Speech* 5(4):221-40.

—. 1971. *Class, Codes and Control: Theoretical Studies Towards a Sociology of Language*. London: Routledge & Kegan Paul.

Bessett, Danielle. 2010. "Negotiating normalization: The perils of producing pregnancy symptoms in prenatal care." *Social Science & Medicine* 71(2):370-77.

Blair-Loy, Mary. 2003. *Competing Devotions: Career and Family among Women Executives*. Cambridge, MA: Harvard University Press.
Blum, Linda M. 1999. *At the breast : ideologies of breastfeeding and motherhood in the contemporary United States*. Boston: Beacon Press.
Bobel, Chris. 2002. *The paradox of natural mothering*. Philadelphia, PA: Temple University Press.
Boltanski, Luc, and Laurent Thévenot. 1999. "The Sociology of Critical Capacity." *European Journal of Social Theory* 2(3):359-77.
Bourdieu, Pierre. 1984. *Distinction: A Social Critique of the Judgement of Taste*. Cambridge, MA: Harvard University Press.
Bridges, Khiara M. 2011. *Reproducing race: An ethnography of pregnancy as a site of racialization*. Berkeley: University of California Press.
Browner, Carole H, and Nancy Press. 1996. "The production of authoritative knowledge in American prenatal care." *Medical Anthropology Quarterly* 10(2):141-56.
Brubaker, Sarah Jane, and Heather E Dillaway. 2008. "Re-examining the meanings of childbirth: Beyond gender and the "Natural" versus "Medical" dichotomy." *Advances in Gender Research* 12:217-44.
—. 2009. "Medicalization, natural childbirth and birthing experiences." *Sociology Compass* 3(1):31-48.
Bunevicius, Robertas, Laima Kusminskas, Adomas Bunevicius, Ruta J. Nadisauskiene, Kristina Jureniene, and Victor J. M. Pop. 2009. "Psychosocial risk factors for depression during pregnancy." *Acta Obstetricia et Gynecologica Scandinavica* 88(5):599-605.
Burt, Ronald. 1992. *Structural Holes: The Social Structure of Competition*. Cambridge: Harvard University Press.
Burt, Ronald S. 2002. "Bridge Decay." *Social Networks* 24:333-63.
—. 2004. "Structural Holes and Good Ideas." *American Journal Of Sociology* 110:349-99.
—. 2005. *Brokerage and closure: An introduction to social capital*. Oxford; New York: Oxford University Press.
Campanella, Karla, Jill E Korbin, and Louise Acheson. 1993. "Pregnancy and childbirth among the Amish." *Social Science & Medicine* 36(3):333-42.
Campbell, James D, Joseph B Stanford, and Bernard Ewigman. 1996. "The social pregnancy interaction model: Conceptualizing cognitive, social and cultural barriers to prenatal care." *Applied Behavioral Science Review* 4(1):81-97.
Caughey, Aaron B., Yvonne W. Cheng, Naomi E. Stotland, A. Eugene Washington, and Gabriel J. Escobar. 2010. "Maternal and paternal race/ethnicity are both associated with gestational diabetes." *American Journal of Obstetrics and Gynecology* 202(6):616.e1-16.e5.
Centers for Disease Control and Prevention. 2013. "Progress in Increasing Breastfeeding and Reducing Racial/Ethnic Differences — United States, 2000–2008 Births." *Morbidity and Mortality Weekly Report* 62(5):77-80.
Chaudron, Linda H., Peter G. Szilagyi, Wan Tang, Elizabeth Anson, Nancy L. Talbot, Holly I. M. Wadkins, Xin Tu, and Katherine L. Wisner. 2010. "Accuracy of Depression Screening Tools for Identifying Postpartum Depression Among Urban Mothers." *Pediatrics* 125(3):e609-e17.
Clarke, Katherine M. 1989. "Creation of meaning: An emotional processing task in psychotherapy." *Psychotherapy: Theory, Research, Practice, Training* 26(2):139-48.
Club Mom/Greenberg Quinlan Rosner Research. 2004, 2005. "Voice of Mom Survey." The Roper Center for Public Opinion Research, University of Connecticut.

Cohen, S., and H. M. Hoberman. 1983. "Positive Events and Social Supports as Buffers of Life Change Stress." *Journal of Applied Social Psychology* 13:99-125.
Collier, Jane Fishburne. 1997. *From Duty to Desire: Remaking Families in a Spanish Village*. . Princeton, NJ: Princeton University Press.
Cooley, Charles Horton. 1956. *Two major works: Social organization. Human nature and the social order*. Glencoe, Ill.: Free Press.
Coser, Rose Laub. 1966. "Role Distance, Sociological Ambivalence, and Transitional Status Systems." *American Journal Of Sociology* 72(2):173-87.
Coser, Ruth Laub. 1975. "The Complexity of Roles as a Seedbed of Individual Autonomy." Pp. 237-63 in *The Idea of Social Structure*, edited by Lewis A Coser. New York: Harcourt.
Cox, J. L., J. M. Holden, and R. Sagovsky. 1987. "Detection of postnatal depression. Development of the 10-item Edinburgh Postnatal Depression Scale." *The British Journal of Psychiatry* 150(6):782-86.
D'Andrade, Roy G. 1995. *The development of cognitive anthropology*. Cambridge; New York: Cambridge University Press.
Davis-Floyd, Robbie. 1992. *Birth as an American Rite of Passage*. Berkeley: University of California Press.
Davis-Floyd, Robbie, and Carolyn Fishel Sargent. 1997. *Childbirth and Authoritative Knowledge: Cross-cultural Perspectives*. Berkeley: University of California Press.
Davis, C. G., S. Nolen-Hoeksema, and J. Larson. 1998. "Making sense of loss and benefiting from experience: Two construals of meaning." *Journal of Personality and Social Psychology* 75:561-74.
De la Rosa, Ivan. 2002. "Perinatal Outcomes among Mexican Americans: A review of an Epidemological Paradox." *Ethinicity and Disease* 2:480-87.
Declercq, Eugene, and Beverley Chalmers. 2008. "Mothers' reports of their maternity experiences in the USA and Canada." *Journal of Reproductive and Infant Psychology* 26(4):295-308.
Declercq, Eugene R., Mary Barger, and Judith Weiss. 2011. "Contemporary childbirth in the United States: Interventions and disparities." Pp. 401-27 in *Reducing racial/ethnic disparities in reproductive and perinatal outcomes the evidence from population-based interventions*, edited by Arden Handler, Joan Kennelly, and Nadine Ruth Peacock. New York: Springer.
Declercq, Eugene R., Carol Sakala, Maureen P. Corry, and Sandra Applebaum. 2008. "New Mothers Speak Out: National Survey Results Highlight Women's Postpartum Experiences." New York: Childbirth Connection.
Declercq, Eugene, Carol Sakala, Maureen Corry, and Sandra Applebaum. 2006. "Listening to Mothers II: Report of the Second National U.S. Survey of Women's Childbearing Experiences." New York: Childbirth Connection.
Declercq, Eugene, Carol Sakala, Maureen Corry, Sandra Applebaum, and Ariel Herrlich. 2013a. "Listening to Mothers III: New Mothers Speak Out." New York: Childbirth Connection.
—. 2013b. "Listening to Mothers III: Pregnancy and Birth." New York: Childbirth Connection.
DeNeve, Kristina M., and Harris Cooper. 1998. "The happy personality: A meta-analysis of 137 personality traits and subjective well-being." *Psychological Bulletin* 124(2):197-229.
Derné, Steve. 1994a. "Cultural Conceptions of Human Motivation and Their Significance for Culture Theory." Pp. 267-87 in *The Sociology of Culture*, edited by Diana Crane. Cambridge, MA: Blackwell.

—. 1994b. "Structural Realities, Persistent Dilemmas, and the Construction of Emotional Paradigms: Love in Three Cultures." *Social Perspectives on Emotion* 2:281-308.
—. 1995. *Culture in Action: Family Life, Emotion, and Male Dominance in Banaras, India*. Albany: State University of New York.
Dillaway, Heather, and Sarah Jane Brubaker. 2006. "Intersectionality and Childbirth: How Women from Different Social Locations Discuss Epidural Use." *Race, Gender & Class* 13(3/4):16-41.
DiMaggio, Paul. 1987. "Classification in Art." *American Sociological Review* 52(4):440-55.
—. 1997. "Culture and Cognition." *Annual Review of Sociology* 23:263-87.
Donahue, Eileen M., Richard W. Robins, Brent W. Roberts, and Oliver P. John. 1993. "The Divided Self: Concurrent and Longitudinal Effects of Psychological Adjustment and Social Roles on Self-Concept Differentiation." *Journal of Personality and Social Psychology* 64(May):834-41.
Dressler, William W. 2012. "Cultural consonance: Linking culture, the individual and health." *Preventive Medicine* 55(5):390-93.
Du Bois, W. E. B. 1995 [1903]. *The Souls of Black Folk*. New York: Signet Classic.
Durkheim, Émile. 1965. *The elementary forms of the religious life*. New York: Free Press.
Eberhard-Gran, Malin, Anne Eskild, Kristian Tambs, Stein Opjordsmoen, and Sven Ove Samuelsen. 2001. "Review of validation studies of the Edinburgh Postnatal Depression Scale." *Acta Psychiatrica Scandinavica* 104(4):243-49.
Emmison, M. 2003. "Social Class and Cultural Mobility: Reconfiguring the Cultural Omnivore Thesis." *Journal of Sociology and Social Welfare* 39(3):211-30.
Entwistle, Vikki A, Mary J Renfrew, Steven Yearley, John Forrester, and Tara Lamont. 1998. "Lay perspectives: advantages for health research." *British Medical Journal* 316:463-65.
Erickson, Bonnie. 1996. "Culture, Class, and Connections." *American Journal Of Sociology* 102:217-51.
—. 2008. "The Context Challenge: Generalizing Social Capital Processes Across Two Different Settings." in *Contexts of Social Capital: Social Networks in Markets, Communities and Families*, edited by Ray-May Hsung, Nan Lin, and Ronald L Breiger. New York: Routledge.
Evenson, Kelly R, and Chyrise B Bradley. 2010. "Beliefs about exercise and physical activity among pregnant women." *Patient education and counseling* 79(1):124-29.
Fenwick, Jennifer, Lynne Staff, Jenny Gamble, Debra K Creedy, and Sara Bayes. 2010. "Why do women request caesarean section in a normal, healthy first pregnancy?" *Midwifery* 26(4):394-400.
Festinger, Leon. 1957. *A Theory of Cognitive Dissonance*. Palo Alto, CA: Stanford University Press.
Fine, Gary Alan. 2004. "Adolescence as Cultural Toolkit: High School Debate and the Repertoires of Childhood and Adulthood." *Sociological Quarterly* 45(1):1-20.
Fischer, Claude. 1982. *To Dwell Among Friends: Personal Networks in Town and City*. Chicago, IL: University of Chicago Press.
Fleuriet, K. Jill. 2009. "Problems in the Latina Paradox: Measuring Social Support for Pregnant Immigrant Women from Mexico." *Anthropology & Medicine* 16(1):49 - 59.
Fosse, Nathan Edward. 2010. "The Repertoire of Infidelity among Low-Income Men: Doubt, Duty, and Destiny." *The ANNALS of the American Academy of Political and Social Science* 629(1):125-43.

Fox, Bonnie J. 2010. *When Couples Become Parents: The Creation of Gender in the Transition to Parenthood*. Toronto: University of Toronto Press.

Gamson, William A., David Croteau, William Hoynes, and Theodore Sasson. 1992. "Media Images and the Social Construction of Reality." *Annual Review of Sociology* 18(ArticleType: research-article / Full publication date: 1992 / Copyright © 1992 Annual Reviews):373-93.

Garrett, Sarah B. 2011. "Foundations of the Cultural Repertoire: An Investigation of Education and Social Network Effects among Expectant Mothers." in *American Sociological Association*. Las Vegas, NV.

—. 2013a. "The Cultural Landscape for Expectant Mothers: Contemporary women's exposure to and attitudes toward select health- and infant-care practices." Unpublished dissertation manuscript: University of California, Berkeley.

—. 2013b. "Foundations of the Cultural Repertoire: An Investigation of Education and Social Network Effects among Expectant Mothers." Unpublished dissertation manuscript: University of California, Berkeley.

—. 2013c. "Too Many Tools? The Consequences of Cultural Repertoire Diversity among Expectant Mothers." Unpublished dissertation manuscript: University of California, Berkeley.

Gaynes, Bradley N., Norma Gavin, Samantha Meltzer-Brody, Kathleen N. Lohr, Tammeka Swinson, Gerald Gartlehner, Seth Brody, and William C. Miller. 2005. "Perinatal depression: Prevalence, screening accuracy, and screening outcomes." Rockville, MD: Agency for Healthcare Research and Quality.

Gelabert, Estel, Susana Subirà, Lluisa García-Esteve, Purificación Navarro, Anna Plaza, Elisabet Cuyàs, Ricard Navinés, Mònica Gratacòs, Manuel Valdés, and Rocío Martín-Santos. 2012. "Perfectionism dimensions in major postpartum depression." *Journal of Affective Disorders* 136(1-2):17-25.

Gergen, Kenneth J. 2000 [1991]. *The Saturated Self: Dilemmas of Identity in Contemporary Life*. New York: Basic Books.

Gibson, J., K. McKenzie-McHarg, J. Shakespeare, J. Price, and R. Gray. 2009. "A systematic review of studies validating the Edinburgh Postnatal Depression Scale in antepartum and postpartum women." *Acta Psychiatrica Scandinavica* 119(5):350-64.

Giddens, Anthony. 1991. *Modernity and Self-Identity: Self and Society in the Late Modern Age*. Stanford, CA: Stanford University Press.

Giordano, Peggy C., Stephen A. Cernkovich, and Jennifer L. Rudolph. 2002. "Gender, Crime, and Desistance: Toward a Theory of Cognitive Transformation." *American Journal Of Sociology* 107(4):990-1064.

Glenn, E. N., G. Chang, and L. R. Forcey (Eds.). 1994. *Mothering, Ideology, Experience, and Agency*. New York: Routledge.

Goffman, Erving. 1959. *The Presentation of Self in Everyday Life*. Garden City, NY: Doubleday Anchor.

—. 1974. *Frame analysis : An essay on the organization of experience*. Cambridge: Harvard University Press.

Goldberg, Amir. 2011. "Mapping Shared Understandings Using Relational Class Analysis: The Case of the Cultural Omnivore Reexamined." *American Journal Of Sociology* 116(5):1397-436.

Granovetter, Mark. 1973. "The Strength of Weak Ties." *American Journal Of Sociology* 78 (6):1360-80.
—. 1983. "The Strength of Weak Ties: A Network Theory Revisited." *Sociological Theory* 1(201-233).
Green, Josephine M. 2012. "Integrating Women's Views into Maternity Care Research and Practice." *Birth* 39(4):291-95.
Green, Josephine M, and Helen A Baston. 2007. "Have women become more willing to accept obstetric interventions and does this relate to mode of birth? Data from a prospective study." *Birth* 34(1):6-13.
Haines, Helen, Christine Rubertsson, Julie F Pallant, and Ingegerd Hildingsson. 2011. "Womens' attitudes and beliefs of childbirth and association with birth preference: A comparison of a Swedish and an Australian sample in mid-pregnancy." *Midwifery*.
Haines, Helen, Christine Rubertsson, Julie Pallant, and Ingegerd Hildingsson. 2012. "The influence of women's fear, attitudes and beliefs of childbirth on mode and experience of birth." *BMC Pregnancy and childbirth* 12(1):55.
Han, Sallie. 2013. *Pregnancy in practice: Expectation and experience in the contemporary US*. New York: Berghahn Books.
Harding, David J. 2007. "Cultural Context, Sexual Behavior, and Romantic Relationships in Disadvantaged Neighborhoods." *American Sociological Review* 72(3):341-64.
—. 2010. *Living the drama: Community, conflict, and culture among inner-city boys*. Chicago; London: The University of Chicago Press.
Harkins, Jennifer, Brendan Carvalho, Amy Evers, Sachin Mehta, and Edward T. Riley. 2010. "Survey of the Factors Associated with a Woman's Choice to Have an Epidural for Labor Analgesia." *Anesthesiology Research and Practice* 2010.
Hartrick, Gweneth A. 1996. "The Experience of Self for Women Who Are Mothers." *Journal of Holistic Nursing* 14(4):316-31.
Hauck, Yvonne, Jennifer Fenwick, Jill Downie, and Janice Butt. 2007. "The influence of childbirth expectations on Western Australian women's perceptions of their birth experience." *Midwifery* 23(3):235-47.
Hayes, Natalie, and Stephen Joseph. 2003. "Big 5 correlates of three measures of subjective well-being." *Personality and Individual Differences* 34(4):723-27.
Hays, Sharon. 1996. *The Cultural Contradictions of Motherhood*. New Haven, CT: Yale University Press.
Hochschild, Arlie. 1979. "Emotion Work, Feeling Rules and Social Structure." *American Journal Of Sociology* 85:551-75.
Holland, J. M., J. M. Currier, and R. A. Neimeyer. 2006. "Meaning reconstruction in the first two years of bereavement: The role of sense-making and benefit-finding." *Omega* 53:175-91.
House, J. S., D. Umberson, and K. R. Landis. 1988. "Structures and Processes of Social Support." *Annual Review of Sociology* 14:293-318.
Howell-White, Sandra. 1997. "Choosing a birth attendant: The influence of a woman's childbirth definition." *Social Science & Medicine* 45(6):925-36.
Hulbert, Ann. 2003. *Raising America: Experts, Parents, and a Century of Advice About Children*. New York: Alfred A. Knopf.
Ivry, Tsipy. 2010. *Embodying Culture: Pregnancy in Japan and Israel*. New Brunswick, NJ: Rutgers University Press.

Jimenez, Vania, Michael C Klein, Myriam Hivon, and Catherine Mason. 2010. "A Mirage of Change: Family-Centered Maternity Care in Practice." *Birth* 37(2):160-67.

John, O. P. 1990. "The "Big Five" Factor Taxonomy: Dimensions of Personality in the Natural Language and in Questionnaires." Pp. 66-100 in *Handbook of Personality*, edited by L. A. Pervin. New York: Guilford Press.

John, Oliver P., and Sanjay Srivastava. 1999. "The Big Five trait taxonomy: History, measurement, and theoretical perspectives." Pp. 102-38 in *Handbook of Personality: Theory and Research*, edited by L. A. Pervin and Oliver P. John. New York: Guilford.

Jouhki, Maija-Riitta. 2011. "Choosing homebirth–The women's perspective." *Women and Birth*.

Kagawa Singer, Marjorie. 2012. "Applying the concept of culture to reduce health disparities through health behavior research." *Preventive Medicine* 55(5):356-61.

Kaufman, Jason. 2004. "Endogenous Explanation in the Sociology of Culture." *Annual Review of Sociology* 30(355-87).

Kelleher, Christa M. 2006. "The physical challenges of early breastfeeding." *Social Science and Medicine* 63(10):2727-38.

Keniston, Kenneth. 1960. *The Uncommitted: Alienated Youth in American Society*. New York: Dell Publishing Company.

Khan, Shamus Rahman. 2011. *Privilege: The making of an adolescent elite at St. Paul's School*. Princeton, N.J.: Princeton University Press.

Kimport, Katrina. 2012. "(Mis)Understanding Abortion Regret." *Symbolic Interaction* 35(2):105-22.

Kirk, David S., and Andrew V. Papachristos. 2011. "Cultural Mechanisms and the Persistence of Neighborhood Violence." *American Journal Of Sociology* 116(4):1190-233.

Krans, EE, JG Gearhart, PM Dubbert, PM Klar, AL Miller, and WH Replogle. 2005. "Pregnant women's beliefs and influences regarding exercise during pregnancy." *Journal of the Mississippi State Medical Association* 46(3):67.

Lamont, Michèle. 1992. *Money, Morals, and Manners: The Culture of the French and American Upper-Middle Class*. Chicago: University of Chicago Press.

—. 2000. *The Dignity of Working Men: Morality and the Boundaries of Race, Class, and Immigration*. Cambridge, MA: Harvard University Press.

Lamont, Michèle, and Mario Luis Small. 2008. "How Culture Matters: Enriching our Understanding of Poverty." Pp. 76-102 in *The Colors of Poverty: Why Racial and Ethnic Disparities Persist*, edited by A. Chih Lin and D.R. Harris. New York: Russell Sage Foundation.

Lamont, Michèle, and Laurent Thévenot (Eds.). 2000. *Rethinking Comparative Cultural Sociology: Politics and Repertoires of Evaluation in France and the United States*. Cambridge, MA: Cambridge University Press; Paris: Presses de la Maison de Sciences de l'Homme.

Lareau, Annette. 2003. *Unequal Childhoods: Class, Race and Family Life*. Berkeley: University of California Press.

Layne, Linda L. 2003. *Motherhood lost: A feminist account of pregnancy loss in America*: Routledge.

Le Strat, Yann, Caroline Dubertret, and Bernard Le Foll. 2011. "Prevalence and correlates of major depressive episode in pregnant and postpartum women in the United States." *Journal of Affective Disorders* 135(1-3):128-38.

Leavitt, Judith Walzer. 1986. "Brought to Bed: Childbearing in America, 1750 to 1950." New York: Oxford University Press.
Lee, Christina. 1997. "Social Context, Depression and the Transition to Motherhood." *British Journal of Health Psychology* 2(2):93-108.
Lin, Nan. 2000. "Inequality in Social Capital." *Contemporary Sociology* 29(6):785-95.
Lin, Nan, Karen S. Cook, and Ronald S. Burt. 2001. *Social capital : theory and research*. New York: Aldine de Gruyter.
Lin, Nan, and M. Dumin. 1986. "Access to Occupations Through Social Ties." *Social Networks* 8:365-85.
Lin, Nan, Yang-chih Fu, and Ray-May Hsung. 2001. "The Position Generator: Measurement Techniques for Investigations of Social Capital." Pp. 57-81 in *Social Capital: Theory and Research*, edited by Nan Lin, Karen Cook, and Ronald S. Burt. New York: Aldine de Gruyter.
Lizardo, Omar. 2006. "How Cultural Tastes Shape Personal Networks." *American Sociological Review* 71:778-807.
Lowe, Nancy K. 2000. "Self-efficacy for labor and childbirth fears in nulliparous pregnant women." *Journal of Psychosomatic Obstetrics & Gynecology* 21(4):219-24.
Markens, Susan. 2007. *Surrogate motherhood and the politics of reproduction*: Univ of California Press.
Martinez, G., K. Daniels, and A. Chandra. 2012. "Fertility of men and women aged 15-44 years in the United States: National Survey of Family Growth, 2006-2010." in *National Health Statistics Reports*. Hyattsville, MD: National Center for Health Statistics.
McAdam, Doug. 1982. *Political process and the development of Black insurgency, 1930-1970*. Chicago: University of Chicago Press.
—. 1994. "Culture and Social Movements." Pp. 36-57 in *New Social Movements: From Ideology to Identity*, edited by Enrique Laraña, Hank Johnston, and Joseph Gusfield. Philadelphia: Temple University Press.
McCrae, R. R., and P. T. Costa. 1987. "Validation of the five-factor model of personality across instruments and observers." *Journal of Personality and Social Psychology* 52(81-90).
McDowell, Margaret A., Chia-Yih Wang, and Jocelyn Kennedy-Stephenson. 2008. "Breastfeeding in the United States: Findings from the National Health and Nutrition Examination Surveys, 1999-2006. ." in *NCHS Data Brief*. Washington, DC: US Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics.
McLean, Paul D. 1998. "A Frame Analysis of Favor Seeking in the Renaissance: Agency, Networks, and Political Culture." *American Journal Of Sociology* 104(1):51-91.
McPherson, Miller, Lynn Smith-Lovin, and James M. Cook. 2001. "Birds of a Feather: Homophily in Social Networks." *Annual Review of Sociology* 27(ArticleType: research-article / Full publication date: 2001 / Copyright © 2001 Annual Reviews):415-44.
Mead, George Herbert. 1934. *Mind, Self, and Society: From the Standpoint of a Social Behaviorist*. Chicago: University of Chicago Press.
Medvec, Victoria Husted, Scott F. Madey, and Thomas Gilovich. 1995. "When less is more: Counterfactual thinking and satisfaction among Olympic medalists." *Journal of Personality and Social Psychology* 69(4):603-10.
Miller, Laura J. 2002. "Postpartum Depression." *JAMA: The Journal of the American Medical Association* 287(6):762-65.

Miller, Tina. 2005. *Making Sense of Motherhood: A Narrative Approach*. Cambridge, UK: Cambridge University Press.
—. 2007. "'Is This What Motherhood is All About?': Weaving Experiences and Discourse through Transition to First-Time Motherhood." *Gender & Society* 21(3):337-58.
Mills, C. Wright. 1940. "Situated Actions and Vocabularies of Motive." *American Sociological Review* 5(6):904-13.
Mocarski, M., and D. A. Savitz. 2012. "Ethnic Differences in the Association Between Gestational Diabetes and Pregnancy Outcome." *Maternal and Child Health Journal* 16(2):364-73.
Morris, Theresa. 2013. *Cut It Out: The C-Section Epidemic in America*: NYU Press.
Morton, Christine H., and Elayne Clift. 2013. *Birth Ambassadors: Doulas and the re-emergence of woman-supported birth in America*. Amarillo, TX: Praeclarus Press.
Moyer, Melinda Wenner. 2012. "The truth about epidurals: Are they really so bad?" in *Slate*. January 11: http://www.slate.com/articles/health_and_science/medical_examiner/2012/01/the_truth_about_epidurals.html.
Nelson, Fiona F. 2009. *In the Other Room: Entering the Culture of Motherhood*. Winnipeg, Canada: Fernwood Publishing.
O'Brien, T. B., and A. DeLongis. 1996. "The Interactional Context of Problem-, Emotion-, and Relationship-focused Coping: The Role of the Big Five Personality Factors." *Journal of Personality* 64:775-813.
O'Hara, Michael W., and Annette M. Swain. 1996. "Rates and risk of postpartum depression—a meta-analysis." *International Review of Psychiatry* 8(1):37-54.
Oakley, Ann. 1979. *Becoming a Mother*. New York: Schocken Books.
Pachucki, Mark A., and Ronald L. Breiger. 2010. "Cultural holes: Beyond relationality in social networks and culture." *Annual Review of Sociology* 36:205-24.
Padgett, John F., and Christopher K. Ansell. 1993. "Robust Action and the Rise of the Medici, 1400-1434." *American Journal Of Sociology* 98(6):1259-319.
Parker, Wayne D., and Karen K. Adkins. 1995. "The Incidence of Perfectionism in Honors and Regular College Students." *Journal of Secondary Gifted Education* 7(1):303-09.
Parsons, Talcott. 1951. *The Social System*. Glencoe, IL: Free Press.
Patel, Vikram, Ricardo Araya, Mauricio de Lima, Ana Ludermir, and Charles Todd. 1999. " Women, poverty and common mental disorders in four restructuring societies." *Social Science & Medicine* 49(11):1461-71.
Peterson, R. A., and R.M Kern. 1996. "Changing Highbrow Taste: From Snob to Omnivore." *American Sociological Review* 61:900-07.
Peterson, Richard A. 1992. "Understanding Audience Segmentation: From Elite and Mass to Omnivore and Univore." *Poetics* 21:243-58.
Peterson, Richard A., and Albert Simkus. 1992. "How musical tastes mark occupational status groups." Pp. 152-86 in *Cultivating Differences: Symbolic Boundaries and the Making of Inequality*, edited by Michèle Lamont and Marcel Fournier. Chicago: University of Chicago Press.
Puri, Sunita, Vincanne Adams, Susan Ivey, and Robert D. Nachtigall. 2011. "“There is such a thing as too many daughters, but not too many sons”: A qualitative study of son preference and fetal sex selection among Indian immigrants in the United States." *Social Science & Medicine* 72(7):1169-76.

Quah, Stella. 2010. "Health and Culture." Pp. 27-46 in *The New Blackwell Companion to Medical Sociology*, edited by William C. Cockerham. Malden, MA: Wiley-Blackwell.

Rabin, Roni. 2006. "Breast-feed or else." in *The New York Times*: June 13th. http://select.nytimes.com/gst/abstract.html?res=F70810FD38550C708DDDAF0894DE404482.

Rammstedt, Beatrice, and Oliver P. John. 2007. "Measuring personality in one minute or less: A 10-item short version of the Big Five Inventory in English and German." *Journal of Research in Personality* 41:203-12.

Relish, Michael. 1997. "'It's Not All Education': Network Measures as Sources of Cultural Competency." *Poetics* 25:121-39.

Righetti-Veltema, Marion, Elisabeth Conne-Perréard, Arnaud Bousquet, and Juan Manzano. 1998. "Risk factors and predictive signs of postpartum depression." *Journal of Affective Disorders* 49(3):167-80.

Root, Robin, and Carole Browner. 2001. "Practices of the Pregnant Self: Compliance With and Resistance to Prenatal Norms." *Culture, Medicine, and Psychiatry* 25:195-223.

Rosin, Hanna. 2009. "The Case Against Breast-Feeding." Pp. 64-70 in *The Atlantic*.

Ross, L. E., E. M. Sellers, S. E. Gilbert Evans, and M. K. Romach. 2004. "Mood changes during pregnancy and the postpartum period: development of a biopsychosocial model." *Acta Psychiatrica Scandinavica* 109(6):457-66.

Roth, Louise Marie, and Megan M. Henley. 2012. "Unequal Motherhood: Racial-Ethnic and Socioeconomic Disparities in Cesarean Sections in the United States." *Social Problems* 59(2):207-27.

Rothman, Barbara Katz. 1982. *In labor : women and power in the birthplace*. New York: Norton.

—. 1989. *Recreating motherhood : ideology and technology in a patriarchal society*. New York: Norton.

Sakala, Carol. 2012. "Letter from North America: Rapidly Evolving National Maternity Care Landscape in the United States." *Birth* 39(3):263-65.

Schneider, Zevia. 2002. "An Australian study of women's experiences of their first pregnancy." *Midwifery* 18(3):238-49.

Schudson, Michael. 1989. "How culture works." *Theory and Society* 18(2):153-80.

Schutz, Alfred, and Helmut R. Wagner. 1970. *Alfred Schutz on phenomenology and social relations : selected writings*. Chicago; London: University of Chicago Press.

Schwartz, B. 2004. *The Paradox of Choice*. New York: HarperCollins.

Sewell, William H. 1992. "A Theory of Structure: Duality, Agency, and Transformation." *American Journal Of Sociology* 98(July):1-29.

—. 1996. "Historical Events as Transformations of Structures: Inventing Revolution at the Bastille." *Theory and Society* 25:841-81.

Sharp, Lisa K., and Martin S. Lipsk. 2002. "Screening for Depression Across the Lifespan: A Review of Measures for Use in Primary Care Settings." *American Family Physician* 66(6):1001-8.

Shelton, Nikki, and Sally Johnson. 2006. "'I Think Motherhood for Me was a Bit Like a Double-Edged Sword': The Narratives of Older Mothers." *Journal of Community & Applied Social Psychology* 16(4):316-30.

Simmel, Georg. 1971a. "Group Expansion and the Development of Individuality (1908)." Pp. 251-93 in *Georg Simmel on Individuality and Social Forms*, edited by Donald N. Levine. Chicago: University of Chicago Press.

—. 1971b. *On Individuality and Social Forms: Selected Writings*. Chicago: University of Chicago Press.
Simonds, Wendy, Barbara Katz Rothman, and Bari Meltzer Norman. 2007. *Laboring On: Birth in Transition in the United States*. New York: Routledge.
Small, Mario Luis. 2002. "Culture, Cohorts, and Social Organization Theory: Understanding Local Participation in a Latino Housing Project." *American Journal Of Sociology* 108(1):1-54.
—. 2004. *Villa Victoria : the transformation of social capital in a Boston barrio*. Chicago: University Of Chicago Press.
—. 2009. "'How Many Cases Do I Need?': On Science and the Logic of Case Selection in Field-based Research." *Ethnography* 10(1):5-38.
Stearns, Peter N. 2003. *Anxious Parents: A History of Modern Childrearing in America*. New York: New York University Press.
Stokes, Joseph P. 1983. "Predicting satisfaction with social support from social network structure." *American Journal of Community Psychology* 11(2):141-52.
Sung, JF, Beverly D Taylor, Daniel S Blumenthal, Keith Sikes, Virginia Davis-Floyd, Gene McGrady, Teresa C Lofton, and Thomas E Wade. 1994. "Maternal factors, birthweight, and racial differences in infant mortality: a Georgia population-based study." *Journal of the National Medical Association* 86(6):437.
Swidler, Ann. 1986. "Culture in Action: Symbols and Strategies." *American Sociological Review* 51(April):273-86.
—. 2001. *Talk of Love: How Culture Matters*. Chicago: University Of Chicago Press.
Thoits, Peggy A. 1995. "Stress, Coping, and Social Support Processes: Where Are We? What Next?" *Journal of Health and Social Behavior* 35:53-79.
Tilly, Charles. 1978. *From mobilization to revolution*. Reading, MA: Addison-Wesley Publishing Company.
Unger, Jennifer B., and Seth J. Schwartz. 2012. "Conceptual considerations in studies of cultural influences on health behaviors." *Preventive Medicine* 55(5):353-55.
Vaisey, Stephen. 2009. "Motivation and Justification: A Dual-Process Model of Culture in Action." *American Journal Of Sociology* 114(6):1675-715.
Vaisey, Stephen, and Omar Lizardo. 2010. "Can Cultural Worldviews Influence Network Composition?" *Social Forces* 88(4):1595-618.
Van Eijck, K. 2001. "Social Differentiation in Musical Taste Patterns." *Social Forces* 79:1163-84.
van Eijck, Koen, and John Lievens. 2008. "Cultural omnivorousness as a combination of highbrow, pop, and folk elements: The relation between taste patterns and attitudes concerning social integration." *Poetics* 36(2-3):217-42.
Waggoner, Miranda R. 2011. "Monitoring Milk and Motherhood: Lactation Consultants and the Dilemmas of Breastfeeding Advocacy." *International Journal of Sociology of the Family* 37(1):153-71.
Wagner, Marsden. 2006. *Born in the USA: How a Broken Maternity System Must be Fixed to Put Mothers and Infants First*. Berkeley: University of California Press.
Walker, Edward T., Andrew W. Martin, and John D. McCarthy. 2008. "Confronting the State, the Corporation, and the Academy: The Influence of Institutional Targets on Social Movement Repertoires." *American Journal Of Sociology* 114(1):35-76.
Warde, Alan. 2011. "Cultural Hostility Re-considered." *Cultural Sociology* 5(3):341-66.
Warde, Alan, and Modesto Gayo-Cal. 2009. "The anatomy of cultural omnivorousness: The case of the United Kingdom." *Poetics* 37(2):119-45.

Warde, Alan, David Wright, and Modesto Gayo-Cal. 2007. "Understanding Cultural Omnivorousness: Or, the Myth of the Cultural Omnivore." *Cultural Sociology* 1(2):143-64.

Warner, Judith. 2005. *Perfect Madness: Motherhood in the Age of Anxiety*. New York: Riverhead Books.

—. 2006. "Why vilify mothers who bottle-feed?" in *The New York Times*: June 22nd. http://opinionator.blogs.nytimes.com/2006/06/22/why-vilify-mothers-who-bottle-feed/comment-page-4/?apage=7&_r=0.

Warren, Samantha, and Joanna Brewis. 2004. "Matter over mind? Examining the experience of pregnancy." *Sociology* 38(2):219-36.

Weber, Max. 1958. *The Protestant Ethic and the Spirit of Capitalism*. New York: Scribners.

Wolf, Jacqueline H. 2009. *Deliver me from pain: Anesthesia and birth in America*. Baltimore: Johns Hopkins University Press.

Zerubavel, Eviatar. 1997. *Social mindscapes: An invitation to cognitive sociology*. Cambridge, MA: Harvard University Press.

Zerubavel, Eviatar, and Eliot R. Smith. 2010. "Transcending Cognitive Individualism." *Social Psychology Quarterly* 73(4):321-25.

APPENDIX A

TABLE A1. LIST OF INTERPRETIVE FRAMES IN THE SURVEY

These opinions are condensed into their topical clusters below. They are asked separately and interspersed among other topics in the actual survey.

Prompt: "First we'd like to ask you some questions about things you may have heard about pregnancy, childbirth, and babies. Some of these opinions may sound similar, but each one is different from the others in important ways… Have you heard this opinion before?"

1. That women should become *less* physically active while they are pregnant. / That women should *maintain* their normal level of physical activity while they are pregnant. / That women should become *more* physically active while they are pregnant.
2. That an unborn baby's health depends on *God more than anything else*. / That an unborn baby's health depends on *genetics more than anything else*. / That an unborn baby's health depends on the *mother's actions more than anything else***.**
3. That pregnancy itself is a great experience. / That there is nothing great about pregnancy except for the baby.
4. That it is *OK* for a pregnant woman to drink a glass of wine or beer every now and then. / That it is *good* for a pregnant woman to drink a glass of wine or beer every now and then. / That it is *never OK* for a pregnant woman to drink a glass of wine or beer.
5. That, all in all, epidurals are *good* for women in labor. / That, all in all, epidurals are *bad* for women in labor.
6. That it is *common* for women to have serious complications during labor and delivery. / That it is *rare* for women to have serious complications during labor and delivery.
7. That breastmilk and formula are *equally good* for infants. / That *breastmilk* is better than formula for infants. / That *formula* is better than breastmilk for infants.
8. That it is more acceptable to nurse a *boy baby* than a girl baby. / That it is more acceptable to nurse a *girl baby* than a boy baby. / That it is *equally acceptable* to nurse girl and boy babies.
9. That babies should be fed on a *set schedule*. / That babies should be fed *whenever they seem hungry*.
10. That a new mother should try to breastfeed *even if she does not want to*. / That if a new mother does not want to breastfeed, *that is a good enough reason for her not to*.
11. That giving birth is an *empowering* experience. / That giving birth is an *embarrassing* experience.
12. That young babies try to manipulate their parents *on purpose*. / That young babies *cannot* try to manipulate their parents on purpose.

APPENDIX B

SUPPLEMENTAL REGRESSION TABLES FOR CHAPTER 2

TABLE B1. COMPARISON OF OLS & NBREG MODELS, USING MODEL 4 FROM TABLE 2.

	(1) OLS	(2) NBREG
Race/ethnicity: Asian/Pacific Islander	-0.764	-0.153
	(-1.27)	(-1.35)
Race/ethnicity: African American	-1.042	-0.235
	(-1.44)	(-1.62)
Race/ethnicity: Hispanic	0.723	0.145
	(0.94)	(1.05)
Race/ethnicity: Multiethnic/Other	0.333	0.074
	(0.48)	(0.61)
Maternal status: First-time mother	-0.158	-0.025
	(-0.43)	(-0.39)
Ante-natal survey lag (months)	0.079	0.014
	(1.02)	(1.00)
Education: High school diploma or less	-1.533*	-0.295*
	(-1.98)	(-2.02)
Education: Some College	-2.090***	-0.418***
	(-3.75)	(-3.90)
Education: College Degree	-1.028*	-0.181*
	(-2.45)	(-2.47)
Social Network Diversity – Women	0.221**	0.040***
	(3.26)	(3.36)
Constant	4.859***	1.569***
	(7.51)	(13.65)
lnalpha		
Constant		-3.436***
		(-5.34)
N	225	225
R^2	0.189	
Pseudo R^2		0.045
BIC	1120.0	1111.6

Note.—t statistics are presented in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

TABLE B2. COMPARISON OF THE PREDICTIVE EFFECTS OF THE THREE DIFFERENT SOCIAL NETWORK DIVERSITY MEASURES, USING MODEL 4 FROM TABLE 2 (NBREG)

	(1) Mixed	(2) Female	(3) Male
Education: High school diploma or less	-0.359*	-0.295*	-0.388**
	(-2.48)	(-2.02)	(-2.64)
Education: Some College	-0.464***	-0.418***	-0.460***
	(-4.33)	(-3.90)	(-4.24)
Education: College Degree	-0.197**	-0.181*	-0.180*
	(-2.66)	(-2.47)	(-2.41)
Race/ethnicity: Asian/Pacific Islander	-0.150	-0.153	-0.152
	(-1.32)	(-1.35)	(-1.32)
Race/ethnicity: African American	-0.212	-0.235	-0.187
	(-1.46)	(-1.62)	(-1.28)
Race/ethnicity: Hispanic	0.176	0.145	0.221
	(1.28)	(1.05)	(1.59)
Race/ethnicity: Multiethnic/Other	0.110	0.0736	0.112
	(0.90)	(0.61)	(0.90)
Maternal status: First-time mother	-0.038	-0.025	-0.060
	(-0.58)	(-0.39)	(-0.91)
Ante-natal survey lag (months)	0.016	0.014	0.015
	(1.18)	(1.00)	(1.12)
Social Network Diversity: Men and women	0.032**		
	(2.88)		
Social Network Diversity: Women only		0.040***	
		(3.36)	
Social Network Diversity: Men only			0.018
			(1.54)
Constant	1.573***	1.569***	1.754***
	(12.58)	(13.65)	(17.29)
lnalpha			
Constant	-3.350***	-3.436***	-3.185***
	(-5.60)	(-5.34)	(-6.10)
N	225	225	225
R^2			
BIC	1114.4	1111.6	1120.2

Note.—t statistics are presented in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

APPENDIX C

SUPPLEMENTAL REGRESSION TABLES FOR CHAPTER 3

TABLE C1. COMPARISON OF THE PREDICTIVE EFFECTS OF DIFFERENT COMBINATIONS OF THE BIG FIVE PERSONALITY VARIABLES, USING MODEL 5 FROM TABLE 3 (OLS).

	(1)	(2)	(3)	(4)	(5)	(6)
CRD Score	0.285*	0.287*	0.216+	0.280*	0.300*	0.227+
	(2.42)	(2.42)	(1.81)	(2.38)	(2.55)	(1.91)
Education: Some College or less	2.646	2.883+	2.349	3.196+	2.575	2.378
	(1.64)	(1.79)	(1.48)	(1.90)	(1.60)	(1.43)
Education: College degree	0.278	0.393	0.032	0.403	0.167	-0.093
	(0.37)	(0.52)	(0.04)	(0.53)	(0.22)	(-0.12)
Race/ethnicity: Asian/Pacific Islander	2.299+	2.363*	1.755	2.379*	2.532*	1.999+
	(1.98)	(2.02)	(1.51)	(2.05)	(2.17)	(1.72)
Race/ethnicity: Non-Asian/Non-White	-0.297	-0.508	-0.362	-0.266	0.090	0.101
	(-0.23)	(-0.39)	(-0.28)	(-0.20)	(0.07)	(0.08)
Relationship: Cohabiting	-0.143	0.014	-0.091	-0.270	-0.587	-0.650
	(-0.09)	(0.01)	(-0.06)	(-0.17)	(-0.37)	(-0.42)
Relationship: Not married or cohabiting	1.964	2.038	1.433	1.821	2.085	1.487
	(0.94)	(0.97)	(0.70)	(0.87)	(1.00)	(0.73)
Relationship: Data missing	0.727	0.590	0.936	0.762	0.286	0.439
	(0.22)	(0.17)	(0.29)	(0.23)	(0.09)	(0.13)
Mat. status: First-time mother	0.217	0.153	-0.072	0.180	0.276	-0.039
	(0.30)	(0.21)	(-0.10)	(0.25)	(0.38)	(-0.05)
PP survey lag (months)	-0.073	-0.063	-0.101	-0.053	-0.069	-0.093
	(-0.46)	(-0.39)	(-0.64)	(-0.33)	(-0.43)	(-0.59)
Insurance: Medi-Cal (Public)	-4.429+	-4.470+	-3.913	-4.483+	-4.152	-3.544
	(-1.74)	(-1.75)	(-1.56)	(-1.76)	(-1.64)	(-1.42)
Insurance: Data missing	-0.671	-0.724	-0.709	-0.656	-0.350	-0.325
	(-0.19)	(-0.21)	(-0.21)	(-0.19)	(-0.10)	(-0.10)
Had a childbirth complication	0.600	0.569	0.650	0.596	0.734	0.814
	(0.80)	(0.76)	(0.89)	(0.80)	(0.98)	(1.11)

Social support (0-36)	-0.077	-0.092	-0.043	-0.062	-0.115	-0.081
	(-0.99)	(-1.18)	(-0.56)	(-0.79)	(-1.42)	(-0.99)
Satisfaction with childbirth (1-10)	-0.338*	-0.342*	-0.308+	-0.355*	-0.290+	-0.251
	(-2.10)	(-2.11)	(-1.94)	(-2.20)	(-1.77)	(-1.54)
Neuroticism (1-5)	1.715***	1.664***	1.524***	1.672***	1.703***	1.479***
	(4.07)	(3.89)	(3.61)	(3.96)	(4.06)	(3.53)
Openness (1-5) - Long	-0.624		-0.401	-0.558	-0.997	-0.806
	(-1.00)		(-0.65)	(-0.89)	(-1.49)	(-1.21)
Openness (1-5) - Short		-0.0570				
		(-0.13)				
Conscientiousness (1-5)			-1.038*			-1.142*
			(-2.27)			(-2.44)
Agreeable (1-5)				-0.647		-0.168
				(-1.17)		(-0.30)
Extroversion (1-5)					0.668	0.798+
					(1.50)	(1.73)
Constant	6.155	4.582	9.219*	7.832+	5.825	9.571*
	(1.64)	(1.31)	(2.36)	(1.96)	(1.56)	(2.35)
N	119	119	119	119	119	119
R^2	0.319	0.313	0.353	0.329	0.334	0.376

Note.—t statistics are presented in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$