

CULTURAL MEANING
AND
DEFINING A POLICYMAKING SITUATION:
MAKING SENSE OF THE POLICY RESPONSE
TO THE FINANCIAL CRISIS

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Alicia Danielle Eads

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CULTURAL MEANING AND DEFINING A POLICYMAKING SITUATION: MAKING SENSE OF THE POLICY RESPONSE TO THE FINANCIAL CRISIS

Alicia Danielle Eads, Ph.D.

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Faced with a collapsing housing market, which was disrupting financial markets via “toxic” mortgage-backed securities, U.S. policymakers acted aggressively to stabilize financial markets but remained circumspect about intervening in the housing market. Academics and policymakers alike acknowledge that the federal policy response to the housing market collapse was a “gross inadequacy.” This dissertation examines why that was so, identifying variations in key policymakers understandings and expectations of mortgage borrowers and mortgage lenders. The cultural tension was not over the causes of the crisis, as might be expected. Policymakers quickly sorted out the basic narrative of the subprime expansion, loose underwriting, and ubiquitous mortgage-backed securities. Instead, the relevant cultural meanings that implied vastly different policy responses were more fundamental: a construction of mortgage borrowers and lenders. Are mortgage borrowers rational investors who will walk away from an underwater mortgage? Or are they struggling homeowners, taken advantage of by predatory lenders? In one of these constructions it makes sense to commit tax dollars to the problem while in the other it would be irresponsible.

The dissertation also analyzes the construction of the foreclosure crisis within U.S. states, a context that allows for statistical analysis of the relationship between cultural meaning and policy adoption. Some states’ media outlets discussed the foreclosure crisis as a market phenomenon while others discussed it as the result of predatory lending practices. Applying Latent Dirichlet Allocation topic modeling to text from 2,600 newspaper articles, I measure the

multiple cultural meanings that the crisis assumed in different states. Results from event history analyses show that particular cultural meanings predict the adoption of aggressive foreclosure prevention policies, adjusting for other factors such as the extent of the housing market collapse and political party control of state legislatures.

Finally, this dissertation also considers the relationships among wealth, debt, and family stability. The policies implemented in response to the recent crisis influenced which types of assets recovered value following the Great Recession, thus affecting household wealth and the longstanding trend of rising wealth inequality. The crisis policies also allowed a "debt overhang" to remain among millions of households. The family is a key micro-level institution that experiences and transmits the inequality effects of macro-economic policies. Analyses in this part of the dissertation use data from the 1996 to 2008 panels of the Survey of Income and Program Participation to offer a comprehensive account of how wealth and debt relates to family stability. The findings include that, as anticipated, higher holdings of liquid and illiquid assets are associated with a decrease in the likelihood of dissolution. During the Great Recession, median wealth in the U.S. dropped by 44 percent, exposing more families to the risk of dissolution. Indeed, this analysis shows that couples were at 54 percent greater risk of dissolving their unions during the recession years. The analysis also shows, perhaps contrary to intuition, secured debt, such as mortgage debt, is associated with a decrease in the likelihood of dissolution.

BIOGRAPHICAL SKETCH

Alicia Eads started her academic career at Kirkwood Community College in Iowa. She went on to earn a Bachelor of Arts degree in Sociology and Psychology in 2008 from the University of Iowa. Alicia came to the Department of Sociology at Cornell University in 2010 to begin work on a Doctor of Philosophy degree.

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During a class early in my graduate career, the professor told us that what distinguishes successful graduate students from unsuccessful ones is not intelligence but perseverance. Having persevered (and having internalized sociological insights) I would say that individual perseverance would only have gotten me so far without guidance and support. Richard Swedberg provided me with indispensable guidance while simultaneously pushing me toward intellectual independence. He gently insisted that I follow my own instincts in research and avoid thinking like him or anyone else. I am grateful for this and believe that my work is more interesting for his guidance. Mabel Berezin taught me the value and difficulty of presenting ideas and arguments well. She always paid attention to the finer details of my papers and presentations and guided me toward better ways of putting the pieces of both together. Laura Tach supported my development with patience. She also took on the difficult task of bringing a level of practicality to my approach to research. Most importantly, she was encouraging. Genuine encouragement from such an authoritative figure is rare and valuable to graduate students. David Mimno made the technical and mathematical aspects of computational analysis accessible, allowing me to work in the exciting area of computational social science. In addition to these committee members, I also thank my teachers and mentors at the University of Iowa--Celeste Albonetti, Kevin Leicht, Anthony Paik, and Stephen Wieting. Without them, I could never have imagined myself an academic.

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CHAPTER 1: INTRODUCTION

I see realistically only one way in which we could avoid a drag [on the economy] from the financial system, which would be if, in fact, we get lucky and the housing market begins to stabilize and there's a sense that we've reached bottom there and house prices are stabilizing.

Federal Reserve Chairman, Benjamin Bernanke, December 2007¹

Faced with a collapsing housing market, which was disrupting financial markets via “toxic” mortgage-backed securities, U.S. policymakers acted aggressively and innovatively (Cecchetti 2009) to stabilize financial markets but remained circumspect when it came to intervening in the housing market. The financial market stabilization efforts during the crisis were necessary to prevent a collapse of the global financial system (Blinder 2013). However, these efforts alone provided little safety net for more vulnerable market participants. Consequently, the crisis policies shaped the lopsided economic recovery—the financial system was rescued, but millions of middle and low-income homeowners lost their home and net worth and millions more remain “underwater” on their mortgages (Blinder 2015: 139; Mian and Sufi 2015).

An extensive examination of the crisis events and policies using a wide range of primary and secondary sources reveals several important elements of the crisis. First, policymakers faced an uncertain situation—most officials were unsure of what to make of changing indicators from the housing market, including rising mortgage defaults. Second, after a period of ambivalence from government organizations, they settled into general policy positions with regard to the housing

¹ Federal Open Market Committee (FOMC) meeting transcript December 11, 2007.

markets, which they maintained throughout the crisis – the Federal Deposit Insurance Corporation (FDIC) advocated for aggressive government intervention in modifying mortgages while three other organizations at the center of the federal government’s crisis policy response (the Federal Reserve, the Treasury Department, and the Department of Housing and Urban Development) did not. Finally, it is not obvious why the federal government refrained from aggressive policy actions to stabilize the housing markets. As the quote above from Federal Reserve Chairman Bernanke indicates, policymakers saw the related financial and housing market problems as a serious threat to the economy. Further, that a stabilized housing market could avert that threat. However, the arguably most powerful economic policymaker in the U.S. was simply hoping that they would get “lucky” and the housing market would stabilize. Indeed, academics and policymakers alike acknowledge that the policy response to the housing market collapse was a “gross inadequacy” and “half-hearted” (Blinder 2013: 343; Blinder 2015: 148; Geithner 2014; Immergluck 2013). This dissertation contributes substantively to the vast literature on the financial crisis by examining why this was so.

In chapter 2 of this dissertation, I examine the crisis policymaking at the federal level. I find that policymakers’ definition of the housing market problem are necessary to understand why the FDIC, a banking regulator, advocated for government intervention in mortgage modification while other policymakers—including the Department of Housing and Urban Development (HUD), whose *raison d’être* is to support homeownership—opposed such government intervention. Previous work on policymaking and organizational theory more broadly tends to leave the construction of the policymaking problem unexamined.

I incorporate two separate theoretical strands into a coherent framework that sheds light on this complex and consequential policymaking episode. First, I employ a pragmatist

perspective, which recognizes the importance of the definition of the situation for understanding actions pursued in response. Pragmatists theorized that, faced with an unfamiliar situation, actors could experimentally and creatively develop new responses and that these responses would proceed from the definition of the new situation. For some early pragmatists, defining the situation was simply part of the experimental and creative process and they recognized few if any limits on actors' creativity. Although pragmatists emphasize the importance of the definition of the situation they nevertheless left the problem situation "undertheorized and vague" (Whitford 2002: 341).

To bring some precision to the theoretical framework of the problem situation, I identify defining a policymaking situation as a cultural process (Lamont, Beljean, and Clair 2014). Cultural processes are those based on "inter-subjective meaning-making: they take shape through the mobilization of shared categories and classification systems through which individuals perceive and make sense of their environment" (Lamont, Beljean, and Clair 2014: 574). Viewing defining the situation as a cultural process suggests that policymakers' definitions will be constructed from the meanings and categories available to them to make sense of the policymaking situation they face. What I find is that most policymakers defined the problem in the housing market such that government intervention did not make sense. Government-led mortgage modifications made sense according to only the FDIC's definition of the situation, which varied in critical ways from other policymakers' definitions. This analysis contributes to recent culture and policy work by locating available cultural meanings with which to define the situation within policymaking organizations' previous and ongoing engagements in the policy arena. Recent culture and policy scholars highlight the importance of cultural meanings for explaining the content of policies and pinpoint a weakness in previous work that relies on the

vague notion of culture as “national values” (Skocpol 1992; Steensland 2006; Steinmetz 1999; Sewell 1985). Nevertheless, recent work fails to improve upon this much by invoking “deeply embedded cultural categories” (Steensland 2006: 1274) without saying where they are embedded. This analysis also contributes to organizational theory by showing the importance of the definition of the situation that organizations are acting on for understanding their behavior.

In chapter 3 of this dissertation, I quantitatively test the effect of the definition of the situation on passing particular policies. Specifically, I use the context of foreclosure prevention legislation that was passed by some U.S. states during the foreclosure crisis. Some states’ media outlets discussed the foreclosure crisis as a market phenomenon while others discussed it as the result of predatory lending practices. Applying Latent Dirichlet Allocation topic modeling to text data from 2,600 newspaper articles that I collected, I measure the multiple cultural meanings that the crisis assumed in different states. Combining these computational text analysis techniques with standard event history analysis methods, this chapter offers statistical evidence that “culture matters.” Specifically, results show that particular cultural meanings used to discuss the foreclosure crisis predict the adoption of aggressive foreclosure prevention policies, adjusting for other factors such as the extent of the housing market collapse and political party control of state legislatures. I also test whether use of similar cultural meanings to discuss the crisis creates a cultural pathway for policy diffusion between different states (Strang and Meyer 1993; Strang and Bradburn 2001). This analysis joins the emerging body of work that uses computational tools to “measure culture” (Bail 2014) and is one of the first papers to use computational methods to quantify cultural meaning for modeling cultural sources of diffusion (see also Gilardi, Shipan, and Wuest 2017).

Chapter 4 of the dissertation examines micro-level consequences of the macro-level policies that are developed through the processes outlined in the earlier parts of the dissertation. Specifically, this chapter considers the relationships among wealth, debt, and family stability. The policies implemented in response to the recent crisis influenced which types of assets recovered value following the Great Recession, thus affecting household wealth and the long-standing trend of rising wealth inequality (Piketty 2014; Pfeffer, Danziger, and Schoeni 2013). The crisis policies also allowed a “debt overhang” to remain among millions of U.S. households (Mian and Sufi 2014). Wolff (2016) shows that the higher debt ratio among middle-class families going into the recession compared to wealthier households is a major factor in the increased levels of wealth inequality that resulted from the loss of wealth during the recession. The family is a key micro-level institution that experiences and transmits the inequality effects of macro-economic policies and socioeconomic inequalities in family life have grown markedly.

The analysis in this chapter uses data from the 1996 to 2008 panels of the Survey of Income and Program Participation to offer a comprehensive account of how wealth and debt relates to family stability and how that relationship varies by union type, age cohort, and both type and amount of assets and debt. The findings include that, as anticipated, higher holdings of liquid and illiquid assets are associated with a decrease in the likelihood of dissolution. During the Great Recession, median wealth in the U.S. dropped by 44 percent (Wolff 2016), exposing more and more families to the risk of dissolution. Indeed, chapter 4 shows that couples were at 54 percent greater risk of dissolving their unions during the recession years.

Perhaps contrary to intuition, secured debt, such as mortgage debt, is associated with a decrease in the likelihood of dissolution. For all of the concern regarding the growing debt held among U.S. households, there is this one potentially positive association. However, before

encouraging the taking on of secured debts, more needs to be understood about the direction of causality as well as the causal mechanisms underlying this relationship.

Finally, this chapter also makes clear that it is important to distinguish between secured and unsecured debt. Because while lower levels of unsecured debt does not appear to affect relationship stability, large unsecured debts are associated with an increase risk of dissolution.

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CHAPTER 2: SAVING BANKS BUT NOT HOMEOWNERS: A PRAGMATIST FRAMEWORK OF CRISIS POLICYMAKING

Why did policymakers not intervene to stabilize the housing market during the recent housing and financial market crisis in the U.S.? The housing market collapse was the epicenter of the broader financial market crisis and the turmoil in the housing market continued after the panic in financial markets subsided, at least in the U.S. Yet policymakers avoided acting directly to stabilize the housing market. Academics and policymakers alike acknowledge that the policy response to the housing market collapse was a “gross inadequacy” and “half-hearted” (Bair 2012; Blinder 2013: 343; Blinder 2015: 148; Geithner 2014; Immergluck 2013). This article examines why that was so. What I find is that policymakers defined the problem in the housing market such that government intervention did not make sense. This empirical puzzle—why policymakers avoided intervening in the housing market, even as they intervened in the financial markets—allows for an examination of a theoretical question: how do policymakers come to understand the problems they are responding to?

Previous work on policymaking tends to leave the construction of the problem unexamined (Schneider and Sidney 2009) and instead emphasizes the role of organizational institutions and capacity (Skocpol 1985). From this perspective, policymakers will implement policies to the extent that their fiscal resources and organizational capabilities allow. However, this perspective cannot account for the content of the policies that policymakers pursue (Huber, Ragin, Stephens 1993; Korpi 1989; Steensland 2006). Organizational theory more broadly suggests that organizational institutions and routines are not simply resources but function as constraints or guides for policymaking action (Campbell 1998; DiMaggio and Powell 1991;

Scott 2014). However, how do we know which institutions and routines in complex government organizations will guide action in a particular policymaking episode? Further, another organizational theory argues that economic crises, or other such shocks, disrupt the usual reproductive nature of foregoing institutional and organizational structures (Clemens and Cook 1999; Fligstein and McAdam 2012). Which begs the question of what guides policymaking organizations in crisis policymaking episodes?

In this article, I employ a pragmatist perspective, which recognizes the importance of the definition of the situation for understanding actions pursued in response. For pragmatists, social actors encounter the world as situations or problems to be acted upon or solved (Dewey 1929; Gross 2007; 2009; James ([1907] 1981; Joas 1993; McDonnell, Bail, Tavory 2017; Schneiderhan 2011). Most of the time, actors face familiar situations that have accompanying responses or solutions. Sometimes, however, actors face a seemingly novel situation for which they have no ready response.² Faced with an unfamiliar situation, actors can experimentally establish a new line of action. In such a situation, pragmatists stressed the importance of the definition of the situation for understanding action: “every single act...is dependent on the definition of the situation” (Park and Burgess [1921] 1924). They nevertheless left the problem situation “undertheorized and vague” (Whitford 2002: 341). A particular difficulty being that “everything and nothing could be a problem situation” and given the “heavy explanatory load” that the definition of the situation carries, this is unsatisfactory (Whitford 2002: 342).

The aim of this article is to specify the problem situation faced by policymakers during the recent crisis and to elaborate a process by which policymakers defined that situation, which

² This notion of familiar versus unfamiliar situations is similar to Swidler’s (1986) conception of settled versus unsettled times.

in turn implied particular policy responses. The crux of the housing problem during the crisis is reflected in a question repeatedly posed to policymakers: what are you doing to help current homeowners in distress? Policymakers initially responded as if to a familiar problem, by re-framing on-going programs and policies as solutions to the current situation. However, as these solutions increasingly seemed inappropriate or ineffective, policymakers had to make sense of the problem of distressed homeowners.

A critical element in this process is cultural meaning, which recent work examining policymaking emphasizes is necessary for understanding the direction that policymaking takes (Norton 2014; Skrentny 2006; Steensland 2006). The current article contributes by locating relevant cultural meanings within policymaking organizations' engagements in the policy arena—the housing market in the current case. I conceptualize the process of defining the policymaking situation as inter-subjective meaning-making that takes place within and among policymaking organizations (Lamont, Beljean, Clair 2014). Thus, the available meanings and categories with which to define a situation are those embedded at the organizational level. Examining cultural meaning at this level, rather than conceiving of culture at the national level (e.g. Dobbin 1994), helps account for the conflict that often characterizes policymaking. Relevant organizational meanings are those that “solve” the current situation by making sense of it and implying a course of action (Joas 1993; McDonnell, Bail, Tavori 2017).

The case of policymaking during the recent crisis is a good case to examine the process of defining the situation and the effect on the policy response. Economic events and crises are not culturally objective phenomena (Blyth 2002; Hay 1996; 1999). They are uncertain, ambiguous situations that need to be processed into a meaningful problem that policymakers can respond to. However, it can be difficult to recognize definitions as anything other than objective

assessments because they become taken for granted (Berger and Luckmann, 1966), especially when technocrats are the ones constructing the definitions (Fourcade 2009). During this recent crisis, however, one policymaker (the FDIC) defined the situation differently, allowing for comparison.

The research design in this article uses comparison for analytical leverage and combines more traditional comparative data and methods with emerging computational data collection and analysis techniques. I examine the policymaking of four government agencies: the Federal Deposit Insurance Corporation (FDIC), the Federal Reserve (the Fed), the Department of Housing and Urban Development (HUD), and the Treasury Department, leveraging the similarities and differences in the meanings and categories embedded in their pre-crisis engagements with the housing market, their evolving definitions of the housing market problems, and the crisis policies they advocated. I make reference to one additional comparison—between the policymaking aimed at stabilizing the housing market and that aimed at stabilizing the financial market. This comparison casts doubt on some explanations for why policymakers were not more aggressive in stabilizing the housing market. For example, that policymakers did not know if more aggressive plans to stabilize the housing market would work and that there was no political will for more aggressive policies. The comparison with financial market crisis policies is useful here because policymakers did not know whether their efforts in the financial markets would work either (Bernanke 2015; Geithner 2014; Paulson 2010). Yet they proceeded anyway in the face of considerable uncertainty, political opposition, and public backlash. The key to understanding the conflict between the FDIC and the other agencies and to understanding the other agencies hesitancy in intervening in the housing market lies in their definitions of the situation.

THE HOUSING AND FINANCIAL MARKET CRISIS

Housing prices turned in mid-2006, starting a cascade of events.³ Including a drastic increase in mortgage payment delinquencies and foreclosures. Through the spring of 2007, most policymakers predicted that these problems would remain “contained” in the subprime mortgage sector and not “spillover” into the prime housing market (Eichengreen 2014: 169; Paulson 2010: 66).⁴ Policymakers seemed to have little awareness at this time that these emerging problems in the subprime market might spill over into financial markets (Eichengreen 2014: 171; Fligstein, Brundage, and Schultz 2014). However, as defaults and foreclosures continued to rise and, consequently, financial market participants had difficulty valuing the securities that were based on the now-disrupted streams of mortgage payments, this created a crisis in confidence (Swedberg 2013) as market participants were not sure of the extent of their counterparties’ holdings of these now “toxic” assets (Fligstein & Goldstein 2010). Thus, the problems in the housing market spilled over into financial markets. Policymakers and market participants became abruptly aware of this on August 9, 2007 when a large French bank, BNP Paribas, temporarily blocked investors from withdrawing money from three of its funds that were heavily invested in the U.S. housing market (Eichengreen 2014: 176).

What should policymakers do about this related housing and financial market crisis? A December 2007 quote from Federal Reserve Chairman Bernanke suggests that there were two scenarios in which the dual crisis might not catastrophically affect the broader economy:

³ According to the Case-Shiller Index, housing prices peaked in June of 2006.

⁴ Federal Reserve 3/28/07. All quoted speeches will be referenced in footnotes by the agency’s name and the date of the speech. A more complete reference for all quoted speeches can be found in Appendix A.

I see realistically only one way in which we could avoid a drag [on the overall economy] from the financial system, which would be if, in fact, we get lucky and the housing market begins to stabilize and there's a sense that we've reached bottom there and house prices are stabilizing.⁵

One way to avoid a “drag from the financial system” would be if the financial system itself stabilized. The other way, as Bernanke points out, is if the housing market stabilized. Since borrowers not paying on their mortgages constituted the housing market crisis and directly caused the financial market disruptions, policymakers could have addressed the crises from the bottom up, so to speak, by helping borrowers make their mortgage payments. There were various proposals about how, specifically, to do this. For example, “deficit hawk” economist Martin Feldstein suggested that the federal government make loans to homeowners for 20 percent of their current mortgage (Feldstein 2008). Economist and former Fed official, Alan Blinder proposed reviving a Great Depression-era program by which the government would buy and re-write mortgages (Blinder 2008). As long as the government covered at least some of the losses to banks and investors who were holding the mortgage-backed securities, such policies would not erode banks’ balance sheets more than massive foreclosures and asset write-downs would. Such policies would actually work toward stabilizing financial markets, as they would have provided capital to shaky financial institutions. Scholars of the Great Depression show that bank stabilization was indeed one of the effects of that era’s foreclosure prevention efforts (Eichengreen 2014: 239). This consequence of government-funded foreclosure prevention was not lost on government officials during the recent crisis either; one top Treasury official noted, albeit negatively, that such policies were a “way to funnel money to institutions that had made bad lending decisions and to investors who had bought the loans” (Swagel 2009: 28). Opposition

⁵ Federal Reserve 12/11/2007

to funneling money *via* mortgage borrowers is puzzling given the innovative and aggressive efforts implemented to provide capital to institutions and markets by any other means possible.⁶

It is consequential that policymakers did not take up Feldstein's, Blinder's, or others' plans for federal intervention to stabilize the housing market. Eichengreen (2014: 189) argues "we can say that a bit of additional stimulus at the beginning of 2008 might have averted the need for a much larger stimulus in 2009." Policymakers did not take up these plans later either, after the major stress in financial markets had calmed. Treasury even avoided spending money that was earmarked for foreclosure prevention as part of the mandate in the TARP legislation to "maximize assistance to homeowners" (Barofsky 2012; COP 2009, 2011; SIGTARP 2010). Mian and Sufi (2015) argue that the depth of the recession and the slow recovery are attributable to the "debt overhang" borrowers were left with (see also, Blinder 2015: 139).

By the end of 2007, policymakers agreed about the seriousness of the problems in the housing market for the broader economy and they understood the connections between the housing and the financial markets. The Fed shifted into crisis policymaking by putting into effect emergency lending programs to try to stabilize financial markets (Cecchetti 2009: 52). Policymakers knew that crisis policies needed to be "clear and easy-to-execute" and "encourage participation" from financial institutions (Paulson 2010: 306); they could not be "temporizing half-measures" and they could not be used to "mete out punishment" if they were going to work (Geithner 2014: 9). Policymakers were ultimately successful in these efforts; financial markets stabilized and began to recover in early 2009 (Blinder 2013; 2015).

⁶ For information on the Fed's emergency programs, see: <http://www.federalreserve.gov/monetarypolicy/bst.htm>

The picture looks very different from the perspective of the housing market. Unlike the easy-to-execute financial market policies that encouraged participation, the housing policies contained restrictions that severely limited the number of borrowers who were eligible. In this case, policymakers were concerned about meting out punishment, or at least not “rewarding” certain borrowers with help (Swagel 2009; Paulson 2010: 74). Even more consequential than restrictive eligibility rules, the housing policies were also voluntary in that lenders and servicers were encouraged but not required to do anything. The crisis housing policies were criticized almost as soon as they were rolled out and later assessments of them have been no more positive (Blinder 2013, 2015; Immergluck 2013; Kiel and Pierce 2010; NCLC 2009; Powell and Martin 2011; Said and Zito 2007; SIGTARP 2011; Swarms 2008). The percent of mortgages in default continued increasing into 2010 and have yet to return to pre-crisis levels.

THE POLICYMAKERS AND EXISTING EXPLANATIONS

The federal agencies at the center of the crisis policymaking were the Federal Deposit Insurance Corporation (FDIC), the Federal Reserve (the Fed), the Department of Housing and Urban Development (HUD), and the Treasury Department (Bernanke 2015; Blinder 2013, 2015; Paulson 2010; Bair 2012; Geithner 2014). Of these four agencies, only the FDIC sought aggressive government intervention in the housing market. Existing organizational and institutional perspectives are limited in their ability to make sense of this discrepancy in policy solutions between the agencies or why it was the FDIC instead of, for example, HUD that advocated for policies to address the housing market problems.

One existing perspective argues that organizational and institutional structures shape organizations’ actions (DiMaggio and Powell 1991). An explanation from this perspective might

be, for example, the Federal Reserve had legal authority and the organizational capability going into the crisis to lend to liquidity-constrained banks as part of its responsibility to maintain financial stability (see Table 1).

Table 1. Governmental positions and functions of each agency.

Agency	Main Functions	Structural Position
Federal Reserve	<ol style="list-style-type: none"> 1. Conduct monetary policy. 2. Supervise and regulate banks. 3. Maintain financial stability. 	Independent agency; self-funded.
FDIC	<ol style="list-style-type: none"> 1. Deposit insurer. 2. Examine and supervise banks. 3. Receiver for failing banks. 	Independent agency; self-funded.
Treasury	<ol style="list-style-type: none"> 1. Manage Federal finances. 2. Collect taxes. 3. Manage currency production. 4. Supervise banks. 5. Advise on financial, monetary, economic, trade, and tax policy. 6. Enforce Federal finance and tax laws. 	Executive agency; Treasury Secretary is a cabinet member; Treasury is funded through congressional appropriations.
HUD	<ol style="list-style-type: none"> 1. Administer programs to promote housing attainability. 2. Administer programs for community development. 3. Conduct research to guide policies on housing community development. 4. Insure mortgage loans. 	Executive agency; HUD Secretary is a cabinet member; HUD is funded through congressional appropriations.

Thus, we should expect the Fed to develop crisis solutions based on these capabilities. However, a comparative consideration of these four agencies' main functions and structural positions

within the Federal government suggests that we might have expected the Fed and the FDIC, as banking regulators (one of their main functions) and as independent agencies (structural positions), to have advocated a similar approach to the crisis, but they did not. See Table 1. We also might have expected HUD, as the agency whose main function is to support affordable housing and homeownership, to have been the agency supporting government intervention in the housing market but, instead, that was the FDIC.

Further, while organizational and institutional structures may provide a foundation for the crisis policy response, they cannot make sense of deviations in policymaking from the obvious paths set by particular structures. For example, the Treasury Department used its Exchange Stability Fund (ESF), a \$50 billion fund that is supposed to be used in currency trades to stabilize the U.S. dollar, to guarantee the normally uninsured mutual funds.⁷ Neither Treasury's organizational structure nor main functions make sense of Treasury using the fund in this way.⁸ In general, an issue with this perspective is that organizations, particularly large federal agencies, consist of many, sometimes contradictory structures and routines. How can we anticipate which will guide action in any given policymaking episode?

Further, organizational and institutional structures are supposed to guide action by limiting the range of possible actions that organizational actors can imagine while also enabling action by providing scripts or routines for particular courses of action (e.g. Fligstein, Brundage, and Schultz 2014). This misses the reality of interaction that occurred during the crisis

⁷ See Treasury's announcement of the guarantee: <https://www.treasury.gov/press-center/press-releases/Pages/hp1161.aspx>

⁸ Treasury used the ESF in 1994 to guarantee loans to Mexico during the Mexican Peso Crisis. Although this is historical precedent for using the fund in a crisis, this does not explain why Treasury should have used the fund in the recent crisis to backstop money market funds rather than to backstop mortgages or something else altogether.

policymaking. If constraints on action are imposed by the impossibility of imagining alternative lines of action, then early interaction between the agencies should have led to more convergence on policy solutions as they shared information and policy ideas with each other (DiMaggio 1997). This is not what happened. In May 2007, the Treasury Department, the Federal Reserve, and the FDIC met at an inter-agency meeting to discuss the housing market turmoil (Bair 2012; Swagel 2009). During the meeting the FDIC predicted a much steeper increase in the numbers of delinquencies and foreclosures than the other agencies and advocated for systematic, government-led foreclosure prevention efforts but gained no support in this from the other agencies (Bair 2012; Swagel 2009).

While it is possible that commitment to organization-specific routinized lines of actions might have prevented the agencies from seeing each other's perspectives as useful initially (Campbell 1998: 385), in spite of this interaction, institutional scholars predict that habitual responses that fail to achieve results will be abandoned for more creative solutions in crisis situations (Strang and Macy 2001). Thus, as the crisis in the housing markets continued to worsen and the initial policy efforts failed to stem the still-rising defaults and foreclosures, the agencies' initial reluctance to try to the FDIC's solutions should have given way to a willingness to try other approaches. This lack of creativity and willingness in crisis housing solutions is puzzling since there was innovative policymaking during this crisis. The Fed, for example, acted creatively in putting itself at risk of losses on certain Bear Stearns' mortgage-backed securities in order to assist in the sale of Bear to JP Morgan Chase and again in making emergency loans to American International Group (AIG). As noted earlier, Treasury put its Exchange Stability Fund to creative use in backstopping money market funds. Although these agencies acted innovatively during the crisis, all of the creativity was aimed at stabilizing financial markets. Only the FDIC

developed creative solutions to stabilize the housing market. For example, in order to spur mortgage modifications, the FDIC proposed a loss-sharing policy in which the Federal government would share the losses on a mortgage that had been modified according to certain guidelines, if the borrowers ultimately ended up in foreclosure anyway (Bair 2012).

Culture and policy scholars have been building the case that cultural meanings and categories are necessary to understand policies and their particularities (Steinmetz 1999; Campbell 1998). For example, Skrentny (2006) shows that cultural categories affect policymakers' perceptions regarding which groups are considered "minorities" and, further, as "deserving" minorities, thus affecting the enactment of affirmative action intervention on behalf of some ethno-racial groups but not women or white ethnic groups. Similarly, Steendland (2006) observes that cultural categories of worth prevented guaranteed annual income welfare policies from passing in the U.S. because such policies would transgress cultural boundaries that separated the "worthy" poor from the poor who were "unworthy" of government assistance. Norton (2014) argues more broadly that the ability of states to carry out action, in general, is organized and coordinated around cultural meanings. Much like Weber's notion that ideas work like "switchmen" to determine the "tracks" along which social action will proceed (Weber [1922] 1946: 280), cultural meaning shapes which are the appropriate arenas and content of policy interventions.

However, it remains unclear how particular meanings become relevant in particular policymaking episodes. Integrating the pragmatist perspective is one way to address this issue because it suggests that culture enters the policymaking process via the definition of the situation. In turn, contemporary cultural sociology's more precise concept of culture as meaning

improves the pragmatist framework by refining the pragmatist's catchall concept of culture (e.g. Blumer 1969: 6).

A remaining issue is identifying the locus of available cultural meanings. To use Steensland's case as example again, if unemployment becomes "structural" unemployment during a particular policymaking episode, where did "structural" come from? Why was it available to the Kennedy administration to define the situation in this way? Recent culture and policy scholars pinpoint a weakness in previous work that relies on the vague notion of "national values," which suggests that meaning is floating around, with about equal consistency, everywhere within national borders (Steensland 2006; Steinmetz 1999; Sewell 1985). Nevertheless, recent work fails to improve upon this much by invoking "deeply embedded cultural categories" (Steensland 2006: 1274) without saying where they are embedded and others simply leave the "origins of...meanings" "beyond the scope" of current work (Skrentny 2006: 1768). Norton (2014: 1560), in his work on the English empire's ability to effectively exert power over pirates, posits "State agents in different positions in the structure of the empire advanced a series of solutions to the problem of classifying and punishing pirates." However, he leaves unexamined the source or reason for the different meanings advanced among different state agents.

PRAGMATIST DEFINITION OF THE SITUATION AS CULTURAL PROCESS

The situation in the housing market developed into an "indeterminate situation" that needed to be made sense of (Whitford 2002: 340). Early statements from policymakers reflected uncertainty and ambiguity: the FDIC noted, on the one hand, that "mortgage credit quality remains strong at present" but on the other hand that "certain developments ... could ... potentially amplify the

adverse effects of a housing slowdown.”⁹ The Fed observed, “the OFHEO [housing] price index is still increasing a bit” but also that “the financial condition of some households has become pretty fragile.”¹⁰ Later, in mid-2007, the FDIC reflected:

I don't know of anyone ... who really ‘connected the dots’ on this problem until late last year. Certainly, we all knew sub prime lending was a growing asset class. We all understood that borrowers were exposed to rising interest rates. And we all knew that home prices would not rise at double digit rates forever. But it took a long time to see the problem.¹¹

Faced with such uncertainty and, as policymakers, the task of responding, policymakers do not “grasp at straws”—they are usually not willing to try anything. Instead, they manage the uncertainty by transforming a “problematic situation into a determinate situation,” that is, into a meaningful situation to which they can justifiably respond (Dewey [1939] 2013: 102; Mills 1940: 907).

A problematic situation is transformed into a determinate situation by defining it. Defining a policymaking situation is what Lamont, Beljean, and Clair (2014) call a cultural process. These are processes based on “inter-subjective meaning-making: they take shape through the mobilization of shared categories and classification systems” (574). There are two important elements in this process. One is the element of inter-subjectivity. As Norton (2014) argues, state action involves the coordination of a “complex network of actors” and is not a matter of the “will and ingenuity” of individual state actors (1538, 1560). The definition of a policymaking situation is negotiated inter-subjectively—it proceeds within a group of policymakers and coordinates their actions as a result. The culture operating in the mind of any

⁹ FDIC 11/2/2006

¹⁰ Federal Reserve 12/12/2006

¹¹ FDIC 6/21/2007

one policymaker will influence but not determine the result of the process. Also, bearing in mind that the process of defining a situation unfolds amid uncertainty and ambiguity, individuals are not likely to be clear in their own minds what is going on or what their interests are.

Nevertheless, once a particular situation is evoked, social actors operate based on that situation and have strong sense of what should and should not be done in such a situation (Swidler 2008).

In addition, Mears (2011) argues that, for the most part, this is a non-cynical process in that actors come to actually see the situation as defined.

A second important element of the process is shared meanings and categories. Early pragmatists imagined social actors' creativity as more or less limitless. However, Mills (1940) argues that creativity and experimentation in developing new lines of action are constrained by the language available to discuss possible responses and to justify those responses after the fact. Similarly, Norton (2014) argues that state actors in the early English empire were "constrained by existing codes of state meaning making" in developing effective ways to deal with pirates (1560). McDonnell, Bail, and Tavory (2014) describe moments of solving a situation as "Aha!" moments (4). These are moments in which the application of particular meanings gives shape to an ambiguous situation, bringing a line of action into focus. The coordination of policymaking and policy implementation is generally carried out at the organizational level in the U.S. For example, HUD creates and implements housing policy. The Fed decides and implements monetary policy. As the housing market collapsed, policymakers within these agencies were trying to figure out how their *organization* should respond. Thus, the potentially relevant shared meanings leading to "Ah" moments in defining the housing market situation are likely to be shared at the organizational level and embedded in an organization's experience with the housing market (Kane 1997; McDonnell, Bail, and Tavory 2014: 8).

DATA AND METHODS

This is a case study of crisis policymaking. I examine the policymaking of four federal agencies during the recent crisis, thus I also have the benefit of comparison. There are two main purposes for which case studies are the best tool. One is when working within well-developed theoretical areas and the other is when generating understanding of complex social processes (Feagin, Orum, and Sjoberg 1991; Ragin and Becker 1992; for examples see: Fourcade 2011; Steensland 2006; Vaughan 2006). These purposes require the deep examination afforded by a case study. Often these two purposes overlap as in the current article, which seeks to specify the complex social process of defining and responding to a policymaking problem and in so doing contribute to the well-developed theoretical areas of organizational theory, policymaking, and culture.

The examination of the policymaking of all four agencies in this case focuses on the relationship the agencies had with the housing markets before the problems became apparent, how the agencies talk about the problems once they began to unfold, and what policy responses they supported or avoided. The goal, as Fourcade (2011) calls it, is the “comprehensive empirical cycle” (1724). Which requires identifying a particular process—the cultural process of defining a crisis policymaking problem—and understanding what goes in (cultural meanings available to a group of policymakers), what comes out (that is, what substantively gets constructed in the process of defining a policymaking problem), and what are the consequences.

The analysis in this article draws on over one hundred primary and secondary sources on the housing and financial crisis and the four government agencies at the center of the crisis

policymaking.¹² In addition to the examination of this encompassing set of primary and secondary material, I sought verification of nascent conclusions in a more bounded set of material that could be compared across the four agencies —the complete set of public speeches and congressional testimony (just “speeches” going forward) given by any official from the four agencies during the period of January 1, 2006 to December 31, 2009. This complete set of speeches totaled 1,740 and could be reasonably compared because officials from all four agencies give public speeches and provide congressional testimony. See table 2 for the number of speeches given by each agency.

Table 2. Number of public addresses contributed by each government agency.

Agency	Number of Addresses	Number of Official Speakers
FDIC	151	12
Federal Reserve	419	26
Treasury	824	42
HUD	346	46
Total	1,740	126

Note: 47 of the 419 Fed addresses are from the Federal Reserve Bank of New York (FRBNY). 7 of the 26 Fed speakers are FRBNY officials.

These data are substantively important in this study because public addresses are the main vehicle through which policymakers define the situation for themselves and others. Policy action requires the coordinated effort of many individuals and that coordination occurs “around public,

¹² Sources include: reports, for example, a 2011 Government Accountability Office (GAO) report on the foreclosure crisis and reports from the Special Inspector General of the Troubled Assets Relief Program (SIGTARP); press releases, for example, the 2007 Treasury Department announcement of *FHASecure*, a mortgage refinancing program. I also relied heavily on the Federal Open Market Committee (FOMC) meeting transcripts as well as the Financial Crisis Inquiry Commission (FCIC) material, which included interviews with top government officials.

collective meanings” (Norton 2014: 1544). As former Secretary of State, Dean Acheson, once put it, speeches are “where policy is made” (Acheson 1960: 44).

I employ emerging computational tools to collect and analyze these speech data. To collect the data, I wrote a Python script that would scrape the text of each speech from the four agencies websites. I use Latent Dirichlet Allocation (LDA) topic modeling to systematically and inductively code the speeches for various themes (Blei 2012; DiMaggio, Nag, and Blei 2013: 576; Mohr and Bogdanov 2013). The final result is similar to a set of themes or topics that a researcher reading the speeches might identify. With topic modeling, the topics are determined inductively by the model. This is useful because topics may be revealed that neither the producers of the text nor the analyst were necessarily expecting (DiMaggio, Nag, and Blei 2013; McFarland et al. 2013). For a more technical explanation of LDA, see Appendix B.

This computational classification of the text into topics allows for a comprehensive, overall picture of themes in the speeches. I use these topic classifications for two purposes. One is as a map of the over 3.5 million words in the text, which I use as a guide for further analysis. For example, several topics were housing market related and I could identify which speeches discussed those topics for more in-depth reading. Secondly, I use the topic model results to present a descriptive picture of 1) which policies the four agencies advocated and 2) what issues each agency was focused on in 2006, before the crisis. Appendix B contains a table of the top words in a select set of topics referred to in the article as well as additional information about the topics displayed in figures 1 and 2 below.

The definitions of the situation and embedded pre-crisis meanings presented in the following results section are identified through an iterative process of reading speeches and computationally searching them for occurrences of particular words or phrases and vice versa.

For example, since “lower income borrower” appeared as a relatively frequent tri-gram¹³ in the agencies speeches, I accessed all of the speeches in which the tri-gram appeared and examined the context. Conversely, if “financial innovation” was an important phrase in a particular speech, I would determine whether it appeared elsewhere and, if so, in what context. Through this iterative process and an expansive reading of material outside of the speeches, I developed an understanding of these agencies’ engagements with the housing markets before the crisis, their understanding of the unfolding problems, as well as how they viewed potential solutions. These analyses and data provide evidence of policymakers’ available pre-crisis cultural meanings, their definitions of the crisis, and the policies they advocated.

THE CRISIS RESPONSES

There were two main policy approaches—counseling and mortgage modification—advocated by these agencies in response to the housing market crisis. The counseling approach focused on making sure that borrowers had information about their mortgages and their options. The role that policymakers played in this approach was in facilitating the flow of information. Either by training and providing mortgage counselors or by adjusting the information that lenders were required to share with borrowers. The biggest crisis effort under the counseling approach was the HOPE NOW Alliance. The Alliance brought together mortgage market participants including, lenders, servicers, and securitizers. The idea of the Alliance was to develop and share best practices for dealing with delinquent borrowers. The Alliance also included an outreach effort aimed at getting borrowers to talk with mortgage counselors about their options.

¹³ *n*-grams are a sequence of *n* contiguous words, often ignoring stop words. *n*-grams are used by social scientists as units of meaning (Grimmer and Stewart 2013).

The Alliance was not a government intervention. It was an effort in which policymakers played a coordinating role but was otherwise implemented by the mortgage industry. As Treasury explained, “We have been meeting with the nation's leading mortgage counselors, mortgage servicers, lenders, investors and other industry experts to explore their ideas on how to reach and help homeowners.”¹⁴ HUD did prod the industry to do more, “So we have encouraged the mortgage industry to be aggressive.”¹⁵

The mortgage modification approach involved changing the terms of borrowers' mortgages in various ways. A modification could mean extending or making permanent the “teaser” interest rate on an adjustable-rate mortgage; it could mean extending the timeframe of the loan from, say, thirty years to forty-five; it could also mean writing down the principle balance on the loan, i.e. forgiving some of the mortgage debt. Policymakers were in conflict over the government's role in this policy approach. The Fed, Treasury, and HUD all supported mortgage modifications in general but they held the position that any modifications should be carried out voluntarily by lenders. Treasury called for more modifications to be done but left it to investors to demand the modifications from servicers, “Investors must take an active role in demanding that all mortgage servicers, large or small, are pursuing all available loss mitigation strategies. We have an immediate need to see more loan modifications and refinancing and other flexibility.” The Fed also encouraged lenders and servicers to apply modifications but left it to industry participants to determine when modification was appropriate, “Often, loan workouts are in the interest of all parties. We have also encouraged lenders and servicers to identify and

¹⁴ Treasury 10/10/2007

¹⁵ HUD 10/31/2007

contact borrowers who, with counseling and possible loan modifications, may be able to avoid entering delinquency or foreclosure.”

The FDIC also initially advocated for lenders and servicers to voluntarily modify mortgages, however, they were more direct from the beginning in instructing large-scale and specific modifications, “Specifically, we are suggesting that some of these hybrid loans – the so called 2/28s and 3/27s – can be restructured, and foreclosure avoided...loan servicers should convert them to fixed rate mortgages.”¹⁶ While HUD was “pleased with [the industry’s] response,”¹⁷ the FDIC was not, “Frankly, I’m frustrated that the servicing restructuring has not reached the level that I had hoped it would... We have a huge problem on our hands. We can’t just sit here doing this kind of case by case, laborious restructuring process with all these millions of subprime hybrid ARMs.”¹⁸

By early 2008, the FDIC shifted to outlining specific programs by which the federal government could intervene to modify mortgages, including a proposal to write down principle balances by twenty percent. In outlining these options, the FDIC explained, “While significant, direct government intervention into the mortgage markets should be avoided unless absolutely necessary, current circumstances may dictate that the federal government take a more direct role in facilitating solutions for many thousands of troubled mortgages to avoid more dire consequences for all Americans.”¹⁹

¹⁶ FDIC 11/5/2007

¹⁷ HUD 10/31/2007

¹⁸ FDIC 10/4/2007

¹⁹ FDIC 4/9/2008; FDIC 4/16/2008

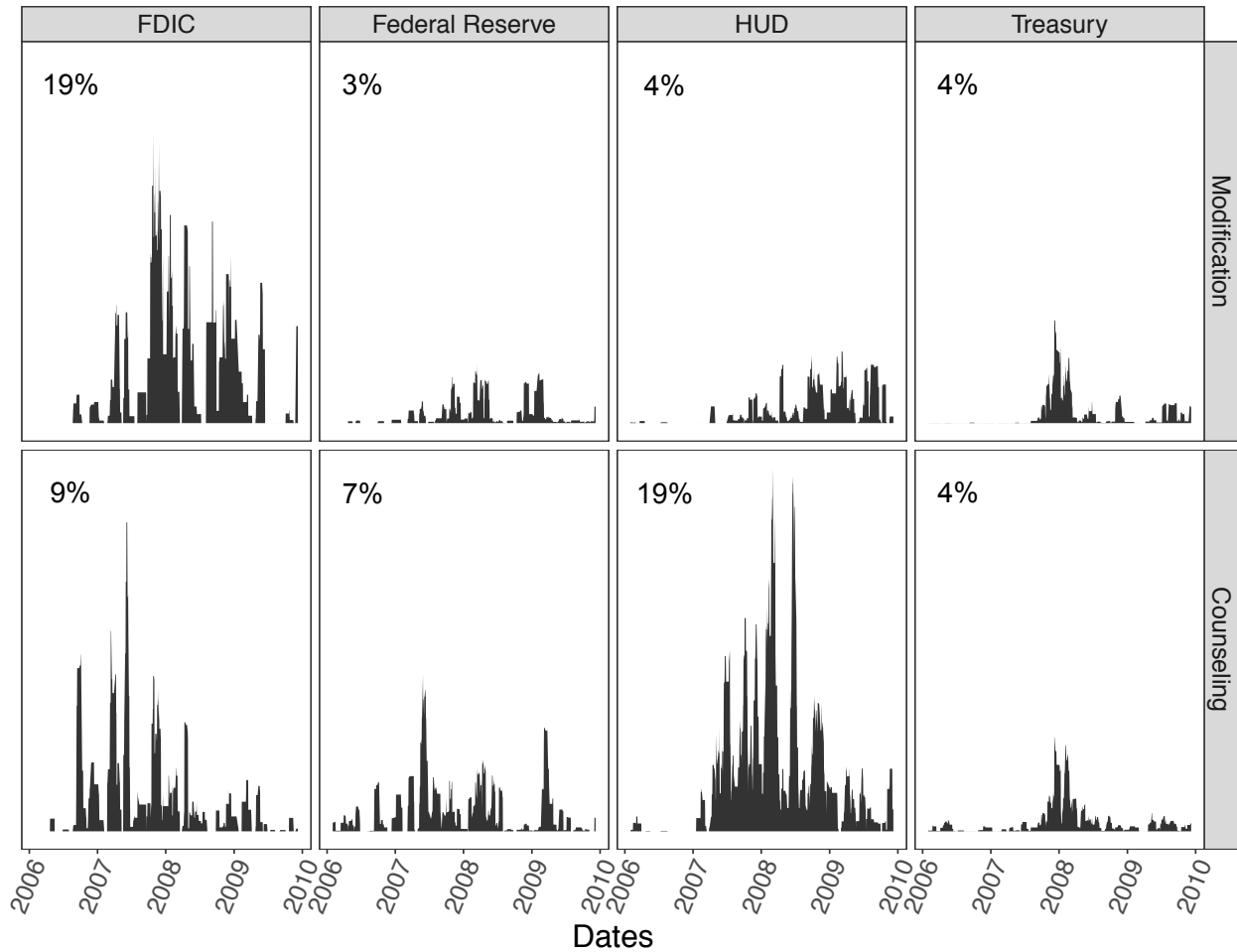


Figure 1. Emphasis on Modification and Counseling Policy Topics by Agency Over Crisis Period. The proportion of the agencies' speeches on either topic have been normalized to account for the variation across the agencies in the total number of speeches that they gave. Thus the y-axis represents an agency's proportional emphasis on the policy approaches. The numbers are not shown on the y-axis because they are meaningful only relatively since the data have been normalized.

Figure 1 shows the emphasis that each agency gave to each policy approach throughout the crisis. The shaded areas show how much each agency discussed each policy approach throughout the crisis.²⁰ The x-axis represents time and each point along the x-axis is a speech.

²⁰ The numbers are not shown on the y-axis because they are meaningful only relatively since the data have been normalized to reflect an agency's proportional emphasis on the policy

The y-axis shows the proportion of the agencies' speeches on either topic and have been normalized to account for the variation across the agencies in the total number of speeches that they gave. The percents in each of the panels give the average percent that an agency's speeches were constituted by the given policy approach.²¹

This figure shows that the FDIC and HUD were the main advocates of the crisis policies but that they favored different approaches. The FDIC favored the modification approach, spending an average of nineteen percent of each speech on the modification topic. HUD spent an average of nineteen percent of each speech on the counseling approach. The Fed and Treasury proportionally discussed both policy approaches less than the FDIC and HUD. Their discussions of these policy approaches peaked at the moments of critical developments in the crisis: in the summer of 2007, following the BNP Paribas event (see page 12 above) and at the end of 2007 when policymakers assessed "The housing decline ... as the most significant current risk to our economy."²²

As Treasury and the Fed began implementing direct, innovative interventions to stabilize financial markets, they and HUD continued to resist calls for government-led modifications.²³ Officials acknowledged that Americans expected them to address the problem—HUD said "[H]omeowners...are worried, very worried, about their homes and their families. They want

approaches, taking into account the variation across agencies in the total number of speeches they give.

²¹ To calculate the percents, I only included speeches from April 1, 2007, even though all speeches are plotted from the beginning of 2006. By April, 2007, all agencies recognized that a problem was underway, thus the percents more accurately measure the percent of speech time each agency gave to the given housing policy approach.

²² Treasury 10/16/2007

²³ The Fed announced its unprecedented currency swap lines with four other central banks on December 12, 2007. See the press release:
<http://www.federalreserve.gov/newsevents/press/monetary/20071212a.htm>

real solutions. They want to know...that we are doing something.” In spite of Treasury’s acknowledgement that private sector efforts would not solve the problem: “The efforts of this private sector [HOPE NOW] alliance alone will not solve the problem,” they made no moves for more direct government intervention. More aggressive government intervention did not make sense based on the Fed, HUD, and Treasury’s definitions of the situation in the housing market.

TRANSFORMING A PROBLEMATIC SITUATION INTO A DETERMINATE SITUATION

Particularly if a problem develops in a policy arena that is not a policymaker’s main focus, external actors may initially be the ones pushing for new solutions. During the recent crisis, external actors—most notably Congress—pushed the agencies to say how they were addressing the situation. Policymakers first reacted by highlighting their current engagements with the housing markets. For example, the Fed had recently expanded an extensive review of required disclosures for credit card terms to include mortgage terms, with the intent of reforming those requirements going forward if they were found lacking.²⁴

However, as mortgage defaults and foreclosures continued rising, the agencies had to say how their efforts would address “current borrower distress”²⁵ or “troubled borrowers.”²⁶ The Fed, for example, said, “I would like to say a few words about what the Federal Reserve is doing to help borrowers who may be facing difficulty paying their mortgages.”²⁷ If policymakers did not have in-progress lines of policy action that could be applied or adjusted to address current borrowers being unable to make mortgage payments, they had to “look for answers” to this

²⁴ Federal Reserve 5/17/2007

²⁵ FDIC 11/9/2007

²⁶ Federal Reserve 11/5/2007

²⁷ Federal Reserve 10/11/2007

problem (Mills 1940; Scheniderhan 2011). Whether the impetus for new solutions comes from within a policymaking organization or externally, policymakers tackle the uncertainty and ambiguity of an unfolding situation by defining it in order to respond.

There are two main components constituting officials' definitions, which varied between the FDIC and the other policymakers, that shaped their responses to current borrower distress: a sense of mortgage borrowers and whether they could or should be helped, as well as a sense of mortgage lenders and whether just a few bad actors engaged in questionable lending practices or whether there was a widespread problem.

Borrowers: consumer choice, speculators, and underwater mortgages

Consumers making choices is how Treasury, the Fed, and HUD understood mortgage borrowers. For these policymakers, mortgage borrowers are consumers making personal choices about available financial products and they are responsible for the consequences of those choices, even if they turn out to have been poor choices. There is little that the government should do when consumers make poor choices. In fact, if the government did step in and protect consumers from their misguided choices, this would create moral hazard: "I know there are some who are calling for a sub prime rescue ... While I have sympathy for people who are in a tricky situation, I strongly disagree with that a bailout is the answer ... There is a reason it is called 'moral hazard.'"²⁸ Further, in the case of the recent crisis, government intervention would reward speculators.

In the U.S., HUD explained, borrowers have choices: "Americans are able to live where they want, and buy what they want. But they also must accept the consequences of those

²⁸ HUD 5/14/2007

decisions.”²⁹ Similarly, Treasury pointed out that, “consumers can choose from mortgage products designed to match their desired payment characteristics.”³⁰ The Fed agreed, “Having a wide variety of mortgage types assists consumers in finding a way to finance the purchase of a home that best meets their own financial and lifestyle requirements.” HUD emphasized that subprime lending opened up the option of homeownership to those who did not have that choice before: “Subprime loans have helped many Americans buy a home who, in the past, might have been shut out of the market.”³¹ The Fed noted, however, that consumers not considering all of their options could be problematic, “But some consumers do not actively shop for a lender ...and do not compare loan terms in light of their personal circumstances. Instead they rely on one lender and accept the mortgage loan presented to them. Mortgages that are appropriate for one borrower, however, may create problems for another.”³²

Officials recognized that the options borrowers have are complex, “the growing complexity of products makes it a bigger challenge for borrowers to understand the characteristics of competing products.”³³ Treasury notes that the process of getting a mortgage “can be extremely complicated.”³⁴ Even so, “that in no way excuses homebuyers from their obligation for due diligence.”³⁵ The Fed similarly recognized that borrowers “may simply have not understood the sometimes complex terms of the contracts they signed.”³⁶ Nevertheless, “People should bear the consequences of their decisions about lending, borrowing, and managing

²⁹ HUD 10/12/2007

³⁰ Treasury 3/15/2007

³¹ HUD 8/28/2007; HUD 4/17/2007

³² Federal Reserve 1/18/2007

³³ Federal Reserve 1/18/2007

³⁴ Treasury 11/30/2007; see also HUD 10/16/2007

³⁵ Treasury 11/2/2007, see also Treasury 11/30/2007

³⁶ Federal Reserve 3/28/2007

their portfolios, both when those decisions turn out to be wise and when they turn out to be ill advised.”³⁷

What consumers need in order to make wise choices is information. “It is simply that we need to know more now ... It is as if every American has awoken to find himself or herself promoted to the position of CFO of his or her own household.”³⁸ “Buying a home is often the biggest purchase most of us will make in our lifetime, and information is critical to ensuring that we make this purchase wisely.”³⁹ With information, what might in some cases be “abusive practices... can be beneficial to at least some consumers. For example, an informed borrower might choose a loan with a prepayment penalty in exchange for a lower interest rate or lower closing costs.”⁴⁰ HUD is less ambivalent about potential abuse in mortgage markets but in any case, consumers need information to protect themselves: “Americans need to be educated to spot bad actors.”⁴¹

The counseling policy approach to the crisis follows from an understanding of mortgage borrowers as consumers making choices and informed consumers making wise choices. In this crisis policy approach, borrowers are still responsible for considering options: “We want these homeowners to begin paying attention to their mortgage statements and talk to their lenders to determine their options early in the process.”⁴² With the counseling approach, borrowers still

³⁷ Federal Reserve 11/28/2007

³⁸ Treasury 4/30/2007

³⁹ Treasury 6/21/2007

⁴⁰ Federal Reserve 6/14/2007

⁴¹ HUD 8/28/2007

⁴² Treasury 10/4/2007

have choices to make and the sooner that a borrower “reaches out to explore financial options, the more likely he or she will be able to find an affordable mortgage solution.”⁴³

A different crisis approach that involved more government intervention than counseling did not make sense to these policymakers because such an approach, in addition to creating moral hazard among consumers who had failed to do their due diligence, it would also reward speculators (Swagel 2009). Even if some consumers seemed to warrant sympathy—“particularly those who may have fewer alternatives, such as lower income families”⁴⁴—there were also “speculators ... who committed fraud.”⁴⁵ Treasury was careful to point out that some borrowers “have made bets on the housing market, buying up multiple houses expecting to make a profit.”⁴⁶ And Treasury did not intend on “assist[ing] speculators who acquired real estate for investment purposes.”⁴⁷ The Fed made the same point, “Some borrowers were actually investors utilizing the ease in terms to purchase investment and rental properties.”⁴⁸

Understanding borrowers as consumers choosing products that meet their interests, especially if some of the borrowers are speculative investors, contributes to a definition of the situation in which borrowers/investors could be expected to rationally choose to abandon their house (Swagel 2009). The Fed explained early rising defaults and foreclosure, in part, by borrowers walking away: “Some borrowers (particularly owner investors) may have found that

⁴³ Treasury 10/10/2007

⁴⁴ Federal Reserve 11/5/2007

⁴⁵ Treasury 11/2/2007

⁴⁶ Treasury 11/19/2007

⁴⁷ Treasury 12/11/2007

⁴⁸ Federal Reserve 3/22/2007, see also Federal Reserve 3/27/2007, Federal Reserve 3/28/2007, Federal Reserve 9/11/2007, Federal Reserve 11/5/2007

simply walking away from their properties was their best option.”⁴⁹ Although the Fed expected walking away to be “particularly likely for those who purchased properties purely for investment purposes,” any borrower who found themselves “‘under water’ that is, the house is worth less than the mortgage balance may be tempted to walk away from their loans.”⁵⁰ Thus, HUD explained that it “more than likely cannot and should not try to help those subprime borrowers who: ... Are involved in speculative investments ... or who lack sufficient positive equity in their homes.”⁵¹ This conception of borrowers strongly influenced whether particular housing market policies made sense to these policymakers (Swagel 2009).

While the FDIC similarly understood mortgage borrowers as consumers making choices, they outlined several factors that they understood to constrain consumers’ choices. One factor working against borrowers, as the FDIC saw it, was housing affordability. “The historic boom we saw in home prices ... pushed up the price of homeownership beyond the means of many families ... particularly those at or below the median income level. One market response to this ... was the wider use of products that reduced monthly mortgage payments for a limited time.”⁵²

The FDIC noted the complexity of mortgage products, as did the other policymakers. However, rather than see that such complexity does not excuse borrowers their due diligence, the FDIC emphasized that complexity “can lead to poor product choices for consumers who do not fully understand them.”⁵³ Additionally, while the Fed outlined situations in which informed consumers may knowingly choose ostensibly unfavorable mortgage terms, the FDIC instead

⁴⁹ Federal Reserve 3/28/2007

⁵⁰ Federal Reserve 11/5/2007; see also Federal Reserve 12/6/2007

⁵¹ HUD 4/17/2007

⁵² FDIC 11/9/2007, see also FDIC 1/12/2007, FDIC 3/22/2007, FDIC 5/31/2007

⁵³ FDIC 4/30/2007

assumed that “many borrowers who opt for [such a] product ... do not understand ... the other options available to them.”⁵⁴

In addition to the complexity of mortgage products, the FDIC also considered that “aggressive or misleading marketing can have a negative impact on the ability of borrowers to make informed credit decisions.”⁵⁵ The FDIC further said that marketing could influence even “cautious” borrowers: “Marketing materials are often crafted to induce even cautious borrowers into inappropriate products.”⁵⁶ While the Fed also discussed “marketing,” they did not negatively characterize the marketing as the FDIC did, referring only to “the marketing of [mortgage] products to a wider spectrum of borrowers.”⁵⁷

A final factor limiting borrowers’ choices, according to the FDIC, is lack of access to low-cost, traditional mortgage products rather than high-cost ones. The FDIC cited Home Mortgage Disclosure Act (HMDA) data, which “indicate[d] that higher priced loans are disproportionately made to minorities and lower income households.”⁵⁸ The FDIC explicitly connected the findings from the HMDA data to the housing market situation: “These [HMDA] data suggest that racial minorities bear a disproportionate impact of recent subprime lending practices.” Which, for the FDIC, “represent[ed] an important dimension of this issue.”⁵⁹

The modification policy approach that the FDIC advocated follows from their understanding of borrowers as “trapped”⁶⁰ in unaffordable mortgages because of conditions and

⁵⁴ FDIC 3/27/2007

⁵⁵ FDIC 3/27/2007, see also FDIC 4/30/2007

⁵⁶ FDIC 3/27/2007

⁵⁷ Federal Reserve 3/27/2007; see also, Federal Reserve 10/11/2007, Federal Reserve 5/23/2007

⁵⁸ FDIC 3/27/2007

⁵⁹ FDIC 5/31/2007; see also FDIC 11/27/2007

⁶⁰ FDIC 3/27/2007; see also FDIC 4/19/2007, FDIC 4/30/2007

factors beyond their control. The FDIC supported other policymakers' efforts to expand counseling but that alone would not be enough. As the FDIC understood the situation, counseling and additional consumer protection regulations "will help protect future borrowers. However, the task at hand is to find ways to help borrowers currently in financial distress."⁶¹ In order to help these borrowers, "it [would] be necessary to consider loan modifications ... to make these loans affordable to the borrowers."⁶² The FDIC felt it was necessary to "encourage servicers to conduct modifications that are in the best interest of the borrower,"⁶³ emphasizing that borrowers needed to be "better serve[d]."⁶⁴

The different conception that the FDIC had of borrowers compared to other policymakers is also reflected in the FDIC's references to underwater borrowers. Other policymakers had difficulty imagining that underwater borrowers would not abandon their houses (and thus mortgages) and assessed policy options accordingly. The FDIC, on the other hand, listed underwater borrowers among the other "hundreds of thousands of lower income borrowers who are at risk of losing their homes in today's sinking housing market."⁶⁵ The FDIC acknowledged speculative and fraudulent activity "particularly [among loans] that exhibited early payment default." Further, the FDIC agreed, "It would be hard to argue that these borrowers deserve the same type of assistance that might be appropriate for borrowers who acted in good faith."⁶⁶

Unlike other policymakers, however, the FDIC did not expect underwater borrowers to walk

⁶¹ FDIC 3/27/2007; see also FDIC 4/17/2007

⁶² FDIC 5/31/2007; see also FDIC 11/9/2007

⁶³ FDIC 6/6/2007

⁶⁴ FDIC 3/5/2007; see also FDIC 10/19/2007

⁶⁵ FDIC 4/19/2007; see also FDIC 4/30/2007

⁶⁶ FDIC 4/17/2007

away from their houses. To the contrary, they were “particularly at risk because they have very little financial cushion.”⁶⁷

Lenders: market pressures, some bad actors, or widespread elementary predatory lending

Officials explained that the higher than usual rates of subprime mortgage defaults was, at least in part, because of “lax” or “loose” underwriting.⁶⁸ The impetus for the “slippage in underwriting standards”⁶⁹ came from certain developments in the mortgage markets. Officials from all four agencies were generally in agreement about these developments as well as their affects on lending standards. Everyone agreed that “excess capacity” or a “fall in demand” from mortgage borrowers in the mid-2000s led to “intense lender competition.” Lenders struggled to maintain origination volume at a time when investor demand for mortgage-backed securities was growing. Lenders responded to these market pressures by “extending loans to subprime borrowers” and “easing lending standards as they competed to attract borrowers.”⁷⁰ Another major development—securitization and the originate-and-distribute model for mortgage lending—led to “some misalignment of incentives.” Though the Fed and treasury emphasized the misalignment between lenders and investors, while the FDIC emphasized the misalignment between lenders and borrowers. The Fed characterized the misalignment as “a classic principal agent problem ... originators (the agents) do not have a sufficient incentive to shield the owners of the securities (the principals) from suffering higher than expected losses [from] loosening

⁶⁷ FDIC 4/19/2007

⁶⁸ Treasury 10/10/2007; see also Treasury 10/17/2007, FDIC 9/5/2007, Federal Reserve 8/31/2007, Federal Reserve 1/11/2007

⁶⁹ Federal Reserve 8/31/2007

⁷⁰ FDIC 3/22/2007; see also Federal Reserve 5/21/2007

underwriting standards.”⁷¹ The FDIC said, “Lenders that retain the mortgages they originate have interests more aligned with those of borrowers ... However, in the case of loans sold on the secondary market ... the lender's preferences are heavily influenced by what market investors want to buy, which may not match what is appropriate for the borrower.”⁷²

While all policymakers recognized weakened underwriting, even some abusive or unfair lending practices, the FDIC and the other agencies’ definitions reflected different conceptions of how widespread lender malfeasance was. The Fed, Treasury, and HUD saw any malfeasance as more isolated, confined to only “some lenders” and “bad actors” (Blinder 2015: 140).⁷³ HUD referred to only “some lenders and brokers [who] pushed the envelope.”⁷⁴ Indeed, HUD mentioned only “one lender [who] bragged of his ‘NINJA’ loans.”⁷⁵ The Fed and Treasury, similarly, explained, “The practices of some mortgage originators have also contributed to the problems in the subprime sector.”⁷⁶ Further, any “excess” by lenders seemed to be nullified by equal “excess” on the part of borrowers. HUD said, “ There have been excesses by both lenders and consumers.”⁷⁷ Treasury agreed, “ I have no doubt that some mortgage brokers and originators engaged in deceptive and predatory practices ... Just as important, and not said as often, I have no doubt that there was an abundance of borrower level fraud as well.”⁷⁸

⁷¹ Federal Reserve 9/10/2007; see also Treasury 9/5/2007

⁷² FDIC 3/27/2007

⁷³ HUD 8/28/2007; see also Federal Reserve 6/14/2007, Treasury 9/20/2007

⁷⁴ HUD 11/15/2007

⁷⁵ HUD 11/28/2007

⁷⁶ Federal Reserve 5/17/2007; see also Treasury 9/5/2007, Federal Reserve 5/21/2007

⁷⁷ HUD 4/17/2007

⁷⁸ Treasury 9/20/2007

In contrast, the FDIC saw “widespread failure” among lenders.⁷⁹ Instead of a few bad actors, the FDIC explained, “These companies used to be relatively small and unsophisticated, but today they have grown to be large, highly sophisticated and highly aggressive marketers of high cost financial services and products ... They have come to dominate the financial services markets in [certain] neighborhoods.”⁸⁰ Further, HUD dramatically distinguished the few bad actors as “slick and sinister predatory lenders.” The FDIC, on the other hand, saw more banal evil, “the most elementary notion of predatory lending – failure to underwrite based on the borrower's ability to pay – became prevalent in the subprime mortgage market.”⁸¹ The FDIC also saw lenders as more culpable than the other agencies did. While the Fed suggested, “lenders, investors, and ratings agencies ... may have underestimated the risk involved,”⁸² the FDIC said, “many risk management fundamentals were ignored.” Even more explicitly, “Lenders and Wall Street understood the risks associated in funding these mortgages.”⁸³

The Fed, Treasury, and HUD defined borrowers as consumers making choices and only some lenders as engaging in abusive practices. In such situation, the best solution is better-informed consumers: “Of course, knowledge is also our best protection against predatory lenders and fraud.”⁸⁴ With “counseling about mortgage products and the responsibilities of homeownership,”⁸⁵ borrowers could be “empowered with the tools to know when to spot a

⁷⁹ FDIC 10/24/2007

⁸⁰ FDIC 6/21/2007

⁸¹ FDIC 11/27/2007

⁸² Federal Reserve 3/27/2007

⁸³ FDIC 4/19/2007

⁸⁴ Treasury 6/21/2007

⁸⁵ Federal Reserve 5/17/2007

sham.”⁸⁶ Counseling consumers would not only empower consumers to protect themselves but by would also “strengthen market competition.”⁸⁷ Informed consumers were a better solution than more aggressive government intervention because there could be negative unintended consequences: “While [increased delinquencies and foreclosures] are serious problems, the [Federal Reserve] Board believes they need to be addressed in a way that preserves incentives for responsible subprime lenders so that borrowers with non prime credit can become homeowners ... It is important that any actions we might take ... do not have unintended consequences.”⁸⁸ HUD agreed “most of the sub prime loans” are “financially responsible loans” and HUD stressed that “We can't abandon the American Dream. Americans who are turned away from the prime lenders still deserve a chance at the Dream. So you will never hear me say that all subprime lenders are bad.”⁸⁹

The FDIC defined the situation differently, as one in which lender “abuses [] are strong and consistent across industry and regulatory lines,” such that “it is difficult even for sophisticated consumers to fully understand the costs associated with particular credit options or to compare alternative products.”⁹⁰ Further, if lenders sold mortgage products that “were never designed to be affordable at the fully indexed rate”⁹¹ and there was a “widespread practice of qualifying borrowers based only on their ability to make payments at the starter rate,”⁹² then the

⁸⁶ HUD 2/15/2007

⁸⁷ Federal Reserve 5/23/2007

⁸⁸ Federal Reserve 3/27/2007; see also Federal Reserve 5/21/2007, Federal Reserve 6/13/2007, Treasury 12/11/2007

⁸⁹ HUD 6/4/2007

⁹⁰ FDIC 6/13/2007

⁹¹ FDIC 11/22/2007; see also FDIC 6/6/2007

⁹² FDIC 11/9/2007

policy response needs to involve “restructur[ing mortgages] into more affordable loans.”⁹³ Why did the FDIC’s sense of lenders and borrowers differ in these ways from the sense the other policymakers had?

A familiar problem

HUD, compared with the other policymakers, experienced the collapsing housing market as a familiar problem for which they had a ready policy response. HUD had an answer to the questions about how their policies could address current borrower distress. First, HUD was already involved with counseling potential homeowners long before the crisis unfolded. In early 2006, while HUD and others were still touting the record rates of homeownership, HUD also discussed their efforts in “housing counseling that has been so useful in helping families prepare for homeownership, avoid predatory lending practices, and avoid default on their homes.”⁹⁴ Additionally, HUD spent 2006 advocating for reforming the rules for Federal Housing Administration (FHA) mortgage insurance, which HUD manages. HUD appealed for FHA reform in this way: “without a viable FHA, many homebuyers—first time homebuyers, minority homebuyers and homebuyers with less than perfect credit—were left with fewer safe and affordable options.”⁹⁵

In familiar situations, a coherent definition of the situation is not necessary because actors already know what to do. As Swidler (1986) explains, in “settled times,” culture is used to sustain the ready response. HUD mobilized certain meanings and categories, as can be seen in the quotes above: “minority homebuyers” and “safe and affordable options.” But these meanings

⁹³ FDIC 10/1/2007

⁹⁴ HUD 3/30/2006

⁹⁵ HUD 6/20/2006; see also HUD 4/5/2006

are mobilized to support policy actions already underway. It is only in “unsettled times” that cultural meaning needs to be weaved into a more coherent definition that provides direction for policymaking.

For HUD, although there was a “subprime problem,” it did not require much explaining. HUD referred simply to “growth” or the “red hot housing market” which “couldn’t generate heat forever.” HUD frequently stressed that mostly everything is fine: “So I am here today to tell you that the sky hasn’t fallen. But we do need to take measures not just to promote homeownership but to protect it for the long term.” Further, counseling and FHA reform are what is needed: “we pushed for more housing counseling the last few years. And [] we have been pushing for Federal Housing Administration reform for two years now. We anticipated this problem.”⁹⁶

PRE-CRISIS ENGAGEMENTS AND EMBEDDED CULTURAL MEANINGS

The cultural meanings and categories that policymakers draw on to define uncertain situations are embedded in their previous and on-going engagements. Policymakers were engaged in many issues and with the housing market itself in various ways before the crisis. Figure 2, on the following page, shows the topics that agencies focused on throughout 2006.

⁹⁶ HUD 6/25/2007

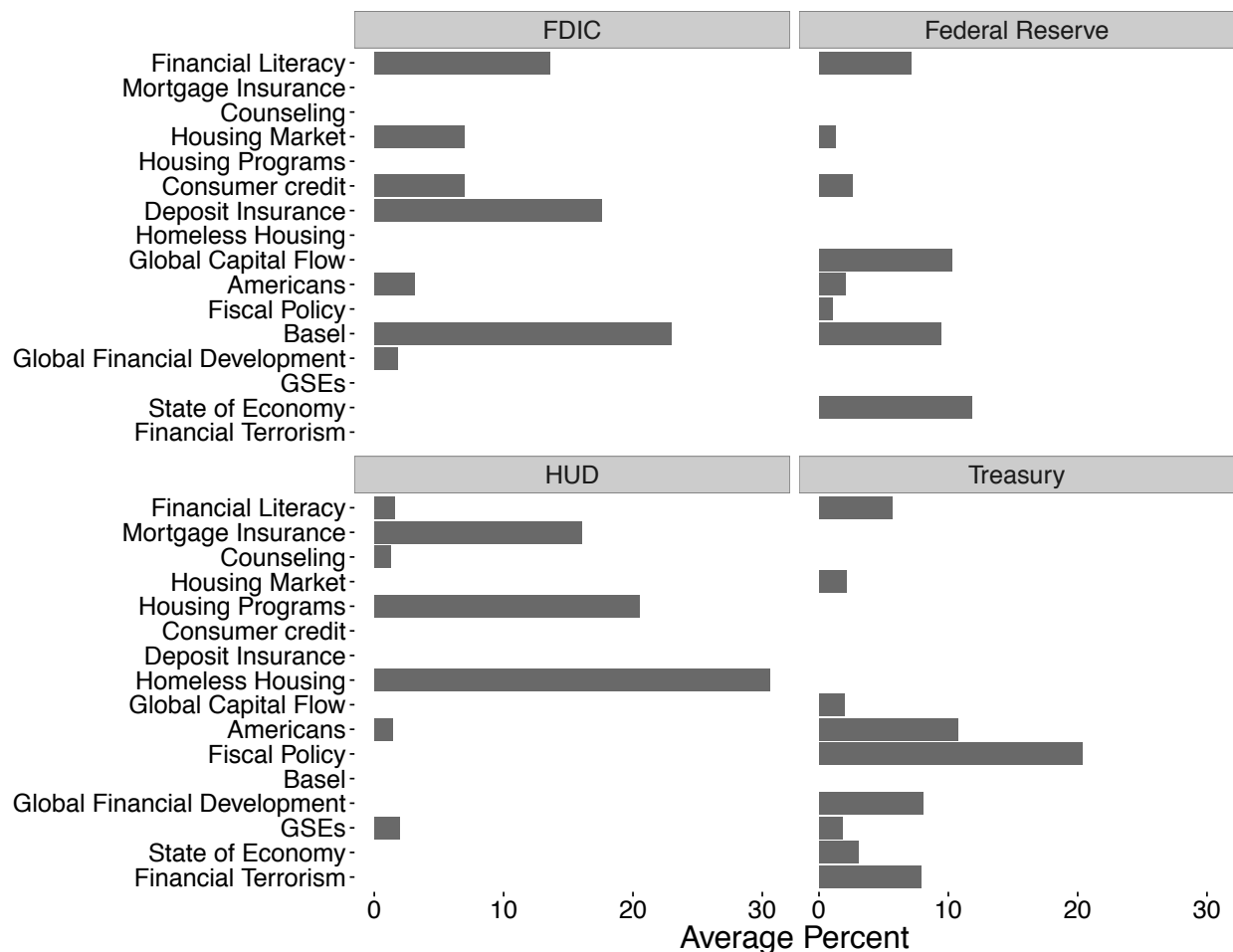


Figure 2. 2006 Topics by Agency. This shows the average percent that an agency's speeches in 2006 were on the given topic. A select set of topics are shown: the top three topics for each agency as well as any housing related topics that an agency discussed at least 1% on average in 2006.

This figure shows the percent of each speech that an agency devoted to a given topic, on average, throughout 2006. The figure displays a select set of topics: the top three topics for each agency as well as any housing market-related topic. For example, as banking regulators, the Basel II bank capital reform was a relatively important topic for the FDIC and the Fed. The FDIC devoted an average of 23% of each speech in 2006 to the reform, while the Fed devoted an average of 9% of each speech to this issue. The Fed spent a little more time, on average, discussing the state of the

economy and global capital flow. Treasury spent the most amount of time in 2006 discussing fiscal policy. And HUD most often discussed its homeless housing and other housing programs. The FDIC, the Fed, and Treasury were all engaged in “monitoring” the housing markets.⁹⁷ This engagement is reflected in Figure 2 by the housing markets topic. Other than monitoring, Treasury’s other engagement with the housing markets in 2006 was advocating for reforming the Government Sponsored Enterprises (GSEs) Fannie Mae and Freddie Mac.⁹⁸ HUD, in addition to its on-going housing programs, was pushing for updating the rules regarding insuring mortgages; this is reflected in the mortgage insurance topic in figure 2.

An important housing market issue for the FDIC and the Fed in 2006 was consumer credit. Part of the Fed and the FDIC’s job as banking regulators is to enforce lending standards and they spent 2006 developing and issuing guidance regarding certain mortgage lending practices.⁹⁹ The consumer credit issue, for the FDIC, also included addressing payday lending and other “high-cost” financial services products.¹⁰⁰ For the Fed, the consumer credit issue included improving consumer disclosures on credit card terms and, beginning in mid-2006, mortgages.¹⁰¹ All of the agencies spent some time in 2006 discussing their efforts at improving financial literacy.

⁹⁷ FDIC 9/13/2006; Federal Reserve 2/15/2006; Treasury 5/9/2006

⁹⁸ The advocacy for reforming Fannie Mae and Freddie Mac followed the accounting scandals both were involved in the early 2000s. Policymakers pushed to establish a new, more powerful regulator for the GSEs who would require a reduction in the GSEs’ portfolios of mortgage-backed securities for their own investment purposes. HUD and the Fed also publically supported these reforms.

⁹⁹ Guidance, as opposed to a regulatory rule, “highlights,” “emphasizes,” or “encourages” regulated financial institutions to follow certain guidelines but does not make legal prohibitions.

¹⁰⁰ FDIC 5/3/2006; see also FDIC 9/27/2006; FDIC 11/30/2006

¹⁰¹ For a report on the credit card disclosure review, see:

<https://www.federalreserve.gov/pubs/Bulletin/2006/creditcards/default.htm>

Information played an important role in the Fed and Treasury's pre-crisis engagements with the housing market. Information was associated with making good financial choices. Treasury emphasized its role in "provid[ing] our citizens with the right tools that can teach them how to make sound financial decisions."¹⁰² The Fed agreed that "financial literacy" was "a source of better decisionmaking by consumers."¹⁰³ Treasury's hope was that consumers would be able to use financial information skills to improve their own lives: "we hope that through our emphasis on increased financial literacy people gain the skills to make better decisions and live better lives."¹⁰⁴ For the Fed, there was another benefit of having informed consumers in the financial services marketplace: "Informed financial decisionmaking is also vital for the healthy functioning of financial markets. Like any other businesses, financial service firms will provide better products at better prices when they are subject to market pressures imposed on them by informed consumers."¹⁰⁵

Information was especially critical for marginal borrowers who more recently gained access to credit as a result of innovations in financial services provision. "Nontraditional mortgages ... have been available for many years, and are beneficial for some borrowers because of the payment flexibility they offer. ... [T]oday these products are being offered to a wider spectrum of consumers, including borrowers for whom these types of mortgages may be ill suited." Given these new developments, the Fed "urge[d] institutions to ensure that their ... communications are consistent with the product terms... This is important so that consumers have

¹⁰² Treasury 3/16/2006

¹⁰³ Federal Reserve 5/23/2006

¹⁰⁴ Treasury 4/30/2007

¹⁰⁵ Federal Reserve 5/23/2006

the information they need at critical decision times.”¹⁰⁶ Importantly, information would “ help consumers recognize and avoid abusive practices in the financial institutions arena.”¹⁰⁷

Although recognition of the potential for abuse appeared in the Fed and Treasury’s pre-crisis engagements, more prominent were positive meanings of financial innovations. As the Fed explained, “Financial innovations have been coming at a rapid pace in recent years...we have seen a proliferation of new lending products in the United States, including home equity lines of credit, interest only and even negative amortization mortgages, and subprime mortgages and consumer loans.”¹⁰⁸ Treasury agreed that “new financial products, which enhance welfare, are being invented every year.”¹⁰⁹

Increased access and choice were among the most important meanings associated with financial innovation for the Fed and Treasury:

Technological advances have dramatically transformed the provision of financial products and services in recent years. To cite just one example, the expanded use of computerized credit scoring models, by reducing the costs of making loans and by increasing the range of assets that lenders can sell on the secondary market, has made possible the extension of credit to a larger group of borrowers.¹¹⁰

Treasury said, “It is first important to note that millions of Americans have been able to move into homeownership because of these products.”¹¹¹ Expanded access and choice, in mostly any form, were positive: “Payday lending outlets, a source of credit that was almost non existent a decade ago, now number more than 10,000.”¹¹² The Fed

¹⁰⁶ Federal Reserve 3/31/2006(a)

¹⁰⁷ Treasury 2/28/2006

¹⁰⁸ Federal Reserve 3/31/2006(b)

¹⁰⁹ Treasury 3/9/2006

¹¹⁰ Federal Reserve 6/13/2006

¹¹¹ Treasury 5/9/2006

¹¹² Federal Reserve 6/13/2006

highlighted the meanings of access and choice using a particularly catchy phrase:

“Indeed, we have seen an increasingly wide array of products being offered to consumers across a range of incomes, leading to what has been called the *democratization of credit* [emphasis added].”¹¹³

In the FDIC’s pre-crisis engagements, information was less about educating consumers to take advantage of new financial products and more about “economic inclusion.”¹¹⁴ Information was associated with bringing “all consumers into the financial mainstream.”¹¹⁵ For the FDIC, “the importance of financial education [is] in leveling the playing field for consumers.”¹¹⁶ The FDIC associated more marginal borrowers with “feelings of exclusion, as well as cynicism about our free market society and the ability of all to participate and benefit.”¹¹⁷ In particular, the FDIC was concerned that “It almost seems as if the [financial services] market has become divided between two groups: those who successfully rely on banks for virtually cost free basic financial services, and those who pay high amounts.”

Higher-cost versus affordable were important meanings associated with financial services products. As a bank regulator, the FDIC stressed that banks “can provide a gateway into the financial mainstream for the unbanked....and provide an array of affordable lending services to meet the needs of all their customers.”¹¹⁸ This was important because “a significant portion of

¹¹³ Federal Reserve 5/23/2006; see also Federal Reserve 6/13/2006, Federal Reserve 11/1/2006, Federal Reserve 11/7/2007, Federal Reserve 7/2/2008, HUD 4/17/2007, HUD 5/14/2007, HUD 6/25/2007, HUD 7/10/2007, HUD 9/20/2007, HUD 10/5/2007, FDIC 4/30/2007, FDIC 5/17/2007

¹¹⁴ FDIC 10/12/2006

¹¹⁵ FDIC 10/12/2006

¹¹⁶ FDIC 9/27/2006

¹¹⁷ FDIC 11/30/2006

¹¹⁸ FDIC 9/27/2006

the United States population lacks access to the banking system and spends significantly more on financial transactions as a result.”¹¹⁹ “Some pay 18 percent for a line of credit linked to their checking account; others pay 500 to 600 percent for a payday loan. ... Some pay a flat 6.7 percent for a fixed, 30 year mortgage and others pay balloon rates as high as 11.4 percent for an exotic alternative loan.”¹²⁰

The FDIC was more ambivalent and wary about financial innovation and new financial products than the Fed and Treasury: “Innovation has brought more choice for consumers, it has also brought more complexity.”¹²¹ While innovations in credit scoring models were associated with the democratization of credit for other policymakers, for the FDIC: “Credit scoring models were developed for the credit card industry...and have not been fully tested as a predictor of default for loans that are such a large percentage of a borrower's income.”¹²² The FDIC associated developments in financial services with “A financial system that strips wealth and locks hardworking families into an endless cycle of debt and financial distress.”¹²³

DISCUSSION AND CONCLUSION

This article has examined how policymaking organizations defined the policymaking situation they faced and why they developed the particular policy responses they did. I have argued that policymakers faced with an uncertain situation will impose meaning on the situation by defining it in particular ways so that they can see a way to respond. The definitions of the policymaking

¹¹⁹ FDIC 8/2/2006

¹²⁰ FDIC 11/30/2006

¹²¹ FDIC 9/27/2006

¹²² FDIC 9/20/2006

¹²³ FDIC 11/30/2006

situation are negotiated inter-subjectively, drawing on the cultural meanings and categories embedded in organizational experiences. These organizational-level meanings have coordinated previous engagements and are the most readily available to make sense of an unfolding situation and coordinate new responses.

More and more borrowers defaulting on their mortgages in 2006 and 2007 was an observable fact that resulted from the confluence of a particular set of socio-historical conditions and policymakers fairly early on came to agree on this set of conditions (see page 37 above). However, the *sense* of borrowers and lenders within this set of conditions is neither “automatic nor obvious” but is, however, highly consequential (Fourcade 2011; Hacking 1999; Norton 2014: 1548). Categorizing borrowers as consumers responsible for their own financial decisions or as unsuspecting victims swept up in financial markets not designed for their benefit has vastly different implications for a justifiable policy response.

A pragmatist perspective addresses several important difficulties as well as clarifies the insights of contemporary theorizing on organizational action, culture, and policymaking. For one, organizational theorists have struggled with reconciling the seemingly contradictory phenomena of stability and change (Clemens and Cook 1999). Policy scholars have similarly struggled to account for incremental versus punctuated policy change (e.g. Fowler et al. 2017). From the pragmatist perspective, stability results when actors recognize situations as appropriate for established lines of action. As policy scholars have previously noted, external actors will sometimes contribute to a sense of appropriateness or inappropriateness of current policies (Redford 1969). In the recent crisis, if policymakers could not justifiably answer the question “what are you doing about rising foreclosures?” with slightly adjusted policies, then they had to come up with new ones.

Change is a potential result of policymakers developing new ways of dealing with a situation. However, a drastic break from previous policy is not likely if policymakers were already engaged in the policymaking arena before the crisis. As surprised as policymakers were about the particular way that socio-historical conditions came together and the consequences, they were nevertheless aware of and engaged with many of the separate conditions before hand. To reiterate an FDIC quote from above: “We all knew sub prime lending was a growing asset class. We all understood that borrowers were exposed to rising interest rates. And we all knew that home prices would not rise at double digit rates forever. But it took a long time to see the problem.”¹²⁴ In those previous engagements, policymakers already had a sense of borrowers and lenders and even of their own responsibilities viz-a-viz borrowers and lenders. As policymakers worked to make sense of an unexpected situation in the housing markets, they drew on their sense of these more fundamental components of the situation.¹²⁵

Additionally, a pragmatist perspective clarifies the insight that culture’s influence is most prominent during “unsettled times,” that is, in unfamiliar situations. Swidler (1986) argues that in unsettled times, when actors are unsure of what to do, they explicitly follow “highly organized meaning systems” (278). The pragmatist perspective suggests that the highly organized meaning system that actors will follow is the constructed definition of the uncertain situation. We can see that in the case of the recent crisis because, as cultural scholars have long noted, culture’s influence is most visible during periods of contest (Alexander and Smith 1993: 166; Swidler

¹²⁴ FDIC 6/21/2007

¹²⁵ External actors can reject policymakers’ definitions of the situation and the new policy solutions, in which case change is more likely. But if the situation involves the arcane world of credit and financial markets and the policymakers are technocrats, external actors are less likely to be able to successfully reject new solutions.

1986). Organizational actors draw on the meanings embedded in their own experiences and when these meanings conflict—disagreement over the crisis policy response will be the result, as was the case between the FDIC and the others (Kane 1997).

Lamont, Beljean, Clair (2014) argue that the frontier in understanding the (re)production of inequality is in identifying the “subtle and largely unconscious” processes that result in inequality. Processes such as defining a housing market crisis such that borrowers are seen as the beneficiaries of an expanded credit market and responsible for the consequences of the market risks they (knowingly or unknowingly) accept along with their mortgages. Unconsciously, policymakers continued to talk about homeownership as a wealth-building mechanism, as they have done in the U.S. for a long time (Quinn 2010) and to see expanded credit markets that open this opportunity to more borrowers as largely beneficial. However, the shift from mortgage markets being “facilitating” markets for homeowners to being facilitating markets for global investors has introduced new levels of volatility and supra-individual sources of risk without a new discussion of who should bear that risk.

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Appendix A. List of speeches and congressional testimony cited.

AGENCY	DATE	SPEECH OR TESTIMONY
Federal Reserve	2/15/2006	Chairman Ben S. Bernanke; Semiannual Monetary Policy Report to the Congress; Before the Committee on Financial Services, U.S. House of Representatives
Federal Reserve	3/31/2006(a)	Governor Susan Schmidt Bies; An Update on Regulatory Issues; At the Banking Institute, Charlotte, North Carolina
Federal Reserve	3/31/2006(b)	Vice Chairman Roger W. Ferguson, Jr.; Financial Regulation: Seeking the Middle Way; At the Institute of International Finance Spring 2006 Membership Meeting, Zurich, Switzerland
Federal Reserve	5/23/2006	Chairman Ben S. Bernanke; Financial literacy; Before the Committee on Banking, Housing, and Urban Affairs of the United States Senate
Federal Reserve	6/13/2006	Chairman Ben S. Bernanke; Increasing Economic Opportunity: Challenges and Strategies; at the Fifth Regional Issues Conference of the Fifteenth Congressional District of Texas, Washington, D.C.
Federal Reserve	11/1/2006	Chairman Ben S. Bernanke; Community Development Financial Institutions: Promoting Economic Growth and Opportunity; at the Opportunity Finance Network's Annual Conference, Washington, D.C.
Federal Reserve	12/12/2006	Federal Reserve Bank of Cleveland President Pianalto, FOMC transcript December 12, 2006.
Federal Reserve	1/11/2007	Governor Susan Schmidt Bies; Enterprise Risk Management and Mortgage Lending; at the National Credit Union Administration 2007 Risk Mitigation Summit
Federal Reserve	1/18/2007	Governor Susan Schmidt Bies; Economic Outlook and Developments in Mortgage Markets; at the Eller College of Management Distinguished Speaker Series, Tucson, Arizona
Federal Reserve	3/22/2007	Roger T. Cole, Director, Division of Banking Supervision and Regulation; Subprime mortgage market; Before the U.S. Senate Committee on Banking, Housing, and Urban Affairs
Federal Reserve	3/27/2007	Sandra F. Braunstein; Subprime mortgages; Director, Division of Consumer and Community Affairs; Before the Subcommittee on Financial Institutions and Consumer Credit, Committee on Financial Services, U.S. House of Representatives
Federal Reserve	3/28/07	Federal Reserve Chairman Benjamin Bernanke, speech before the Joint Economic Committee, U.S. Congress, March 28, 2007
Federal Reserve	5/17/07	Chairman Ben S. Bernanke; The Subprime Mortgage Market; At the Federal Reserve Bank of Chicago's 43rd Annual Conference on Bank Structure and Competition, Chicago, Illinois
Federal Reserve	5/21/2007	Sandra Braunstein, Director, Division of Consumer and Community Affairs; Bank mergers, Community Reinvestment Act enforcement, subprime mortgage lending, and foreclosures; Before the Subcommittee on Domestic Policy, Committee on Oversight and

		Government Reform, U.S. House of Representatives, at the Carl B. Stokes U.S. Court House, Cleveland, Ohio
Federal Reserve	5/23/2007	Governor Randall S. Kroszner; Creating More Effective Consumer Disclosures; at the George Washington University School of Business, Financial Services Research Program Policy Forum, Washington, D.C.
Federal Reserve	6/13/2007	Governor Randall S. Kroszner; The role of federal banking agencies in strengthening federal financial consumer protection; Before the Committee on Financial Services, U.S. House of Representatives
Federal Reserve	6/14/2007	Governor Randall S. Kroszner; Encouraging Responsible Mortgage Lending: Prospective Rulemaking Initiatives; at the public hearing under the Home Ownership and Equity Protection Act (HOEPA), Federal Reserve Board, Washington, D.C.
Federal Reserve	8/31/2007	Chairman Ben S. Bernanke; Housing, Housing Finance, and Monetary Policy; at the Federal Reserve Bank of Kansas City's Economic Symposium, Jackson Hole, Wyoming
Federal Reserve	9/10/2007	Governor Frederic S. Mishkin; Outlook and Risks for the U.S. Economy; to the Money Marketeers of New York University, New York, New York
Federal Reserve	9/11/2007	Chairman Ben S. Bernanke; Global Imbalances: Recent Developments and Prospects; at the Bundesbank Lecture, Berlin, Germany
Federal Reserve	10/11/2007	Governor Randall S. Kroszner; Markets, Financial Institutions, and Consumers: The Roles of the Federal Reserve; At the National Bankers Association 80th Annual Convention, Durham, North Carolina
Federal Reserve	11/5/2007	Governor Randall S. Kroszner; The Challenges Facing Subprime Mortgage Borrowers; At the Consumer Bankers Association 2007 Fair Lending Conference, Washington, D.C.
Federal Reserve	11/7/2007	Governor Kevin Warsh; The End of History?; To the New York Association for Business Economics, New York, New York
Federal Reserve	11/28/2007	Vice Chairman Donald L. Kohn; Financial Markets and Central Banking; C. Peter McColough Series on International Economics, Council on Foreign Relations, New York, New York
Federal Reserve	12/6/2007	Governor Randall S. Kroszner; Loan modifications and foreclosure prevention; Before the Committee on Financial Services, U.S. House of Representatives
Federal Reserve	12/11/2007	Federal Reserve Chairman Bernanke, FOMC transcript
Federal Reserve	7/2/2008	Governor Frederic S. Mishkin; Global Financial Turmoil and the World Economy; at the Caesarea Forum of the Israel Democracy Institute, Eliat, Israel
FDIC	5/3/2006	Remarks by Martin J. Gruenberg Acting Chairman Federal Deposit Insurance Corporation Before the 2006 Federal Home Loan Banks Directors' Conference

FDIC	8/2/2006	Opening Remarks of Vice Chairman Martin J. Gruenberg, Minority Depository Institutions National Conference
FDIC	9/20/2007	Statement of Sandra L. Thompson, Acting Director, Division of Supervision and Consumer Protection, Federal Deposit Insurance Corporation on Nontraditional Mortgage Products; Before The Subcommittee on Economic Policy and Subcommittee on Housing and Transportation of the Committee on Banking, Housing and Urban Affairs; U.S. Senate; Room 538, Dirksen Senate Office Building
FDIC	9/27/2006	Remarks by Sheila C. Bair, Chairman, Federal Deposit Insurance Corporation, to Fannie Mae 2006 Annual Fair Lending Conference, Washington, DC
FDIC	10/12/2006	Remarks by Sheila C. Bair, Chairman, Federal Deposit Insurance Corporation; Before the National Bankers Association Annual Conference; Las Vegas, Nevada
FDIC	11/2/2006	Semiannual Report: Economic Conditions and Emerging Risks in Banking November 2, 2006
FDIC	11/30/2006	Remarks by Sheila C. Bair, Chairman, Federal Deposit Insurance Corporation; before the Financial Services Conference of the Consumer Federation of America; Washington, DC
FDIC	1/12/2007	Remarks by Sheila C. Bair, Chairman, Federal Deposit Insurance Corporation; Before the California Bank Presidents Seminar; Santa Barbara, California
FDIC	3/5/2007	Remarks of Martin J. Gruenberg, Vice Chairman, Federal Deposit Insurance Corporation; Before the 2007 America's Community Bankers Government Affairs Conference; Washington, D.C.
FDIC	3/22/2007	Sandra L. Thompson, Director, Division Of Supervision And Consumer Protection, Federal Deposit Insurance Corporation on Mortgage Market Turmoil: Causes And Consequences, before the Committee On Banking, Housing And Urban Affairs, U.S. Senate, Room 538, Dirksen Senate Office Building
FDIC	3/27/2007	Sheila C. Bair, Chairman, Federal Deposit Insurance Corporation, on Subprime and Predatory Lending: New Regulatory Guidance, Current Market Conditions, and Effects on Regulated Institutions; before the Subcommittee on Financial Institutions and Consumer Credit of the Committee on Financial Services; U.S. House of Representatives; 2128 Rayburn House Office Building
FDIC	4/17/2007	Statement of Sheila C. Bair, Chairman, Federal Deposit Insurance Corporation on Possible Responses to Rising Mortgage Foreclosures before the Committee on Financial Services, U.S. House of Representatives; 2128 Rayburn House Office Building
FDIC	4/19/2007	Remarks by Sheila C. Bair, Chairman, Federal Deposit Insurance Corporation to the Greenlining Institute's 14th Annual Minority Economic Development & Homeownership Conference – Los Angeles, Calif.

FDIC	4/30/2007	Statement of Sheila C. Bair, Chairman, Federal Deposit Insurance Corporation on The Federal Government's Role in Empowering Americans to Make Informed Financial Decisions before the Subcommittee On Oversight Of Government Management, The Federal Workforce, And The District Of Columbia of the Committee On Homeland Security And Governmental Affairs; United States Senate; Room 342, Dirksen Senate Office Building
FDIC	5/17/2007	Remarks by Sheila C. Bair, Chairman, Federal Deposit Insurance Corporation at the Federal Reserve Bank of Chicago's 43rd Annual Conference on Bank Structure and Competition, Chicago, Illinois
FDIC	5/31/2007	Remarks of Martin J. Gruenberg, Vice Chairman, FDIC, CSBS Annual Conference, Coeur d'Alene, Idaho
FDIC	6/6/2007	Remarks of FDIC Chairman Sheila C. Bair, American Securitization Forum (ASF) Annual Meeting
FDIC	6/13/2007	Statement of Sheila C. Bair, Chairman, Federal Deposit Insurance Corporation on Improving Federal Consumer Protection in Financial Services; before the Financial Services Committee; U.S. House of Representatives; 2128 Rayburn House Office Building
FDIC	6/21/2007	Remarks of Martin J. Gruenberg, Vice Chairman, FDIC; Alliance for Economic Inclusion Kick-off; Los Angeles, California
FDIC	9/5/2007	Statement of Sheila C. Bair, Chairman, Federal Deposit Insurance Corporation on Recent Events in the Credit and Mortgage Markets and Possible Implications for U.S. Consumers and the Global Economy before the Financial Services Committee, U.S. House of Representatives; 2128 Rayburn House Office Building
FDIC	9/13/2007	Statement of Richard A. Brown, Chief Economist, Federal Deposit Insurance Corporation on The Housing Bubble And Its Implications For The Economy; before the Subcommittee on Economic Policy and Subcommittee on Housing and Transportation; Committee on Banking, Housing and Urban Affairs; U.S. Senate; Room 538, Dirksen Senate Office Building
FDIC	10/1/2007	Remarks by FDIC Chairman Sheila Bair National Community Tax Coalition 6th Biennial Conference; Denver, CO
FDIC	10/4/2007	Remarks by FDIC Chairman Sheila Bair at Clayton Holding, Inc. Investor Conference -- New York, NY
FDIC	10/19/2007	FDIC Chairman Sheila Bair -- Fix Rates to Save Loans, <i>New York Times</i>
FDIC	10/24/2007	Statement of Sheila C. Bair, Chairman, Federal Deposit Insurance Corporation on Legislative Proposals on Reforming Mortgage Practices, before the Financial Services Committee, U.S. House of Representatives; 2128 Rayburn House Office Building
FDIC	11/5/2007	Remarks by FDIC Chairman Sheila Bair at the National Association of Home Builders housing affordability symposium; George Washington University conference center, Washington, D.C.
FDIC	11/9/2007	Remarks by FDIC Chairman Sheila Bair to American Community

		Bankers Annual Meeting, Las Vegas, Nevada
FDIC	11/22/2007	Remarks by John F. Bovenzi, Deputy to the Chairman and Chief Operating Officer, Federal Deposit Insurance Corporation; Regulating the Frontiers of Competition in a Growing Economy; at the 2007 China International Banking Convention, Beijing, People's Republic of China
FDIC	11/27/2007	Remarks of Martin J. Gruenberg, Vice Chairman, Federal Deposit Insurance Corporation (FDIC) at the 2007 Annual Meeting of the European Forum of Deposit Insurers, Istanbul, Turkey
FDIC	4/9/2008	Statement of Sheila C. Bair, Chairman, Federal Deposit Insurance Corporation on Using FHA for Housing Stabilization and Homeownership Retention; before the Committee on Financial Services, U.S. House of Representatives; 2128 Rayburn House Office Building
FDIC	4/16/2008	Statement of Arthur J. Murton, Director, Division of Insurance and Research, Federal Deposit Insurance Corporation on Hope for Homeowners Act of 2008; before the Committee on Banking, Housing, and Urban Affairs, U.S. Senate, 538 Dirksen Senate Office Building
HUD	3/30/2006	Secretary Alphonso Jackson; Hearing On HUD's Fiscal Year 2007 Budget; Before the Committee on Financial Services U.S. House Of Representatives
HUD	4/5/2006	Statement of Brian D. Montgomery Assistant Secretary for Housing - Federal Housing Commissioner; Hearing before the U.S. House of Representatives Committee on Financial Services Subcommittee on Housing and Community Opportunity
HUD	6/20/2006	Statement of Brian D. Montgomery, Assistant Secretary for Housing - Federal Housing Commissioner, before the United States Senate Committee on Banking, Housing, and Urban Affairs Subcommittee on Housing and Transportation
HUD	2/15/2007	Statement of Orlando J. Cabrera Assistant Secretary for Public and Indian Housing Before the Committee on Indian Affairs United States Senate
HUD	4/17/2007	Statement of Brian D. Montgomery, Assistant Secretary for Housing - Federal Housing Commissioner, before the House Committee on Financial Services, United States House of Representatives
HUD	5/14/2007	Alphonso Jackson, Secretary of Housing and Urban Development, at the Homeownership Summit, Washington D.C.
HUD	6/4/2007	Alphonso Jackson, Secretary of Housing and Urban Development, at the National Press Club; Promoting and Protecting Homeownership
HUD	6/25/2007	Alphonso Jackson, Secretary of Housing and Urban Development at the FHA Regional Homeownership Summit Los Angeles, California

HUD	7/10/2007	Secretary Alphonso Jackson Speaking Before the American Real Estate Society / Macau, China
HUD	8/28/2007	Roy Bernardi, Deputy Secretary Department of Housing and Urban Development, Greenville, N.C. Making Homeownership a Reality Conference
HUD	9/20/2007	Statement by Secretary Alphonso Jackson before the Committee on Financial Services United States House of Representatives
HUD	10/5/2007	Alphonso Jackson, Secretary of Housing and Urban Development, Federal Home Loan Bank of Dallas
HUD	10/12/2007	Alphonso Jackson, Secretary of Housing and Urban Development, at the Texas leadership summit for young professionals in Austin, TX
HUD	10/16/2007	Alphonso Jackson Secretary of Housing and Urban Development, at the Mortgage Bankers Association 94 th annual convention
HUD	10/31/2007	Alphonso Jackson, Secretary of Housing and Urban Development, Washington, D.C.
HUD	11/15/2007	Alphonso Jackson, Secretary of Housing and Urban Development, Detroit, M.I.; Homeownership Workshop
HUD	11/28/2007	Alphonso Jackson, Secretary of Housing and Urban Development, Washington, D.C.; International Housing Finance Policy Roundtable The U.S. Mortgage Market: Concerns and Prospects for International Investors
Treasury	2/28/2006	Assistant Secretary for Financial Institutions Emil Henry Prepared Remarks Credit Union National Association (CUNA) Government Affairs Conference
Treasury	3/9/2006	Deputy Assistant Secretary for International Monetary and Financial Policy Mark Sobel U.S. Treasury Department
Treasury	3/16/2006	Remarks of U.S. Treasurer Anna Escobedo Cabral Genworth Financial Luncheon
Treasury	5/9/2006	The Honorable John W. Snow Prepared Remarks To The National Association of Home Builders Executive Meeting
Treasury	3/15/2007	Testimony of Treasury Under Secretary Robert K. Steel Before the U.S. House Financial Services Committee on Government Sponsored Enterprise Reform
Treasury	4/30/2007	Testimony of Dan Iannicola, Jr. Deputy Assistant Secretary for Financial Education Before the U.S. Senate Subcommittee on Oversight of Government Management, the Federal Workforce, and the D.C.
Treasury	6/21/2007	Remarks by Anna Escobedo Cabral U.S. Treasurer U.S. Department of the Treasury Before the New Mexico Mortgage Lenders Association
Treasury	9/5/2007	Testimony of Robert K. Steel Under Secretary for Domestic Finance U.S. Department of the Treasury Before the House

		Committee on Financial Services
Treasury	9/20/2007	Testimony of Treasury Secretary Henry M. Paulson, Jr. Before the House Committee on Financial Services On the Legislative and Regulatory Options For Minimizing and Mitigating Mortgage Foreclosures
Treasury	10/4/2007	Treasurer Anna Escobedo Cabral Remarks Before the Eastern Regional Conference on Reaching Unbanked People
Treasury	10/10/2007	Statement by Secretary Henry M. Paulson, Jr. on Announcement of New Private Sector Alliance – HOPE NOW
Treasury	10/16/2007	Remarks by Secretary Henry M. Paulson, Jr. on Current Housing and Mortgage Market Developments Georgetown University Law Center
Treasury	10/17/2007	David G. Nason, Assistant Secretary for Financial Institutions Remarks on Financial Regulation Before the Exchequer Club
Treasury	11/2/2007	Under Secretary Steel Testifies on Comprehensive Foreclosure Prevention Plan
Treasury	11/19/2007	Under Secretary for Domestic Finance Robert K. Steel Remarks at Senator Norm Coleman’s Housing Townhall Forum
Treasury	11/30/2007	Remarks of Treasurer Anna Escobedo Cabral on Working Together to Help Struggling Homeowners
Treasury	12/11/2007	U.S. Treasury Assistant Secretary for Financial Institutions David G. Nason Remarks before the City of London Corporation Redesigning U.S. Financial Regulation for a Global Marketplace

Appendix B. Description of LDA and text analysis procedures

Practically speaking, topic-modeling algorithms identify words that consistently co-appear together as “topics” or themes. For the current analysis, I use Latent Dirichlet Allocation (LDA), which is the simplest and most commonly used model in the topic models family (Blei 2012). In order to implement LDA, the researcher must have a collection of texts, usually called a corpus. The corpus must be separated into different “documents” because the model looks for words that consistently co-appear together within the separate documents. I use each public address as a separate document. Thus, the model looks for words that consistently co-appear together in different public addresses.

The corpus, then, constitutes the observed data, i.e., words within documents, which the model uses to estimate the “distributions over words”—the set of topics in the corpus; and the “distributions over topics”—the topics that each document is “about.” The words in the corpus are assigned to different topics with varying probabilities. Words that have a high probability within a given topic are those words that are most likely to occur with the other words in that topic. A topic about the subprime crisis will have words like “mortgage” and “subprime” assigned to it with a high probability. In addition to identifying the topics that constitute the corpus, the model solution also indicates the topics that make up each document. These distributions indicate the proportion of words in each document that come from given topics. Thus, a document with 90% of its words from the worker benefit topic is mostly “about” worker benefits.

More technically, the distribution over words (i.e., the topics in the corpus) and the distributions over topics (i.e. the topics within documents) are hidden random variables in a

hierarchical probabilistic model. LDA approximates the conditional distribution of those variables, given the observed data (Blei 2012). LDA does this by simultaneously working to meet two estimation goals: 1) allocating the observed words in each document to only a few topics and 2) establishing topics that have only a few words in them with a high probability. If the solution allocates only one topic to a document, meeting the first goal, then not all of the document's words can occur in the topic with a high probability, thus violating the second goal. In order to meet the second goal, the words in the document must be assigned to several topics but the words cannot be allocated to very many topics without violating the first goal. This tension between these two estimation goals is key to LDA discovering useful topics (Blei 2012; DiMaggio, Nag, and Blei 2013).

In the current analysis, I followed several common procedures for processing the text before running the topic models. I removed all numbers, punctuation, and “stop” words, which are commonly occurring words such as “the” and “and.”¹²⁶ I also stemmed the words. This means that, for example, the words “mortgage” and “mortgages” would both be changed to the root term “mortgag.” I conservatively removed the most sparse terms, meaning terms that occurred 0 times in 99% of the documents (Griffiths and Steyvers 2004).

Sometimes officials use the same speech on more than one occasion. I checked the documents for duplicates and identified nine sets of duplicates. I removed one of the duplicates from each set before running LDA then applied the appropriate topic assignments from the

¹²⁶ The full list of stop words that I removed is that compiled and made available by the University of Glasgow's computer science department. The list can be seen here: http://ir.dcs.gla.ac.uk/resources/linguistic_utils/stop_words

remaining unique speech to the duplicates afterward. The final result of this processing for LDA was 3,848 unique terms distributed with various frequencies among 1,731 unique documents.

The top ten terms from a select set of 17 topics are shown in Appendix B Table 1. The counseling and consumer credit topics are combined into one topic in Figure 1 in the main article. The Federal Reserve and the FDIC talked more about information disclosure from lenders while HUD and Treasury talked about mortgage counseling. Both policy approaches are focused on information, thus I combined them for the sake of simplicity. Similarly, the financial literacy and economic education topics are combined in Figure 2. The Federal Reserve, when discussing financial literacy used a different set of words than the other agencies did and thus the LDA solution returned two topics where a human coder might have returned one.

CHAPTER 3: STATES STEPPING IN: THE MEANING OF THE FORECLOSURE CRISIS AND STATES' FORECLOSURE PREVENTION LAWS

At the core of the 2008 economic crisis in the United States was a collapse in the housing markets (Blinder 2013; Eichengreen 2014; Shiller 2012). The rate of delinquencies on mortgages increased to eight times higher than the pre-crisis level; about fourteen million homeowners faced foreclosure proceedings; and ten million homeowners are still “underwater” on their mortgage (Martin and Niedt 2015). During this turmoil, the Federal Government helped a select set of borrowers and “encouraged” lenders to modify mortgages but stopped short of more aggressive policies, which many experts called for (e.g. Blinder 2008; Feldstein 2008). For its limited efforts, the Federal Government was accused on the one hand of not doing enough for homeowners and on the other hand of bailing out irresponsible borrowers. Some state governments, nevertheless, stepped into this political fray establishing strong mortgage assistance programs and mandating mortgage modifications. How did this policy effort at foreclosure prevention begin among the states and why were such efforts ultimately adopted by some states but not others?

We might expect collapsing housing markets to motivate politicians to do something in their states, but understanding the specific policies enacted is not straightforward. Particularly when considering housing and spending policies in the U.S. context. The U.S. government, at all levels, has a complex relationship with the housing markets. Government support of the American dream of homeownership clashes, at times, with “laissez-faire sensibilities” in the U.S. (Quinn 2010: 4). Thus producing tensions between efforts that boost and protect homeownership and the great risk shift (Hacker 2006), in which individuals have limited social safety nets when

faced with life's risks – including a housing market collapse (Dwyer and Lassus 2015). Indeed, housing policy scholars find that nations, like the U.S., with high rates of homeownership tend to be countries with weakly developed welfare policies (Kemeny 2005). This relationship, Kemeny (2005) and others (e.g. Castels 1998) argue, is the result of a privatization feedback loop: Governments support private homeownership through housing policies in which the fiscal cost is often obscured (Quinn 2010). Then, the high individual cost of homeownership contributes to a resistance to higher taxes to support more obvious spending policies. When a crisis-induced, deteriorating economy forces millions of homeowners out of their homes and results in the loss of the most valuable asset in their investment portfolios, it is not clear what the government's role should be.

Previous research suggests that understanding policy outcomes requires looking at political institutions and cultural factors, such as ideology. However, before policy-makers know how particular policies fit with ideological positions, policy-makers must first answer the question: what exactly is the problem? Gilardi, Shipan, and Wueest (2017) also argue that work on policy-making has ignored the critical stage of “issue-definition.” However, accurately conceptualizing and measuring the issue definition is a challenge. Gilardi, Shipan, and Wueest (2017) measure the framing of the policy itself, rather than the construction of the problem. How policies are framed is a fairly well examined area (e.g. Campbell 1998). The meaning of the recent foreclosure crisis, on the other hand, was not inherent in the ambiguous, developing events themselves but rather is constructed as individual and organizational actors try to make sense of uncertain situations (Blyth 2002; Hay 1996; 1999; DiMaggio and Powell 1991). Whether social actors ultimately understand the problem of rising foreclosures as a “market

correction” or the result of “predatory lending,” will influence support of foreclosure prevention policies. Different constructions of the problem have vastly different implications for policy.

This paper is among the small but growing number of studies that integrates two large literatures in social science – policy studies and culture (Berezin 2012; Skrentny 2006; Steensland 2006). I elaborate a theoretically meaningful cultural component – event or problem construction and test its influence on policy outcomes among U.S. states. I am able to quantitatively test this theory by advancing new computational techniques that are useful for systematically and inductively measuring and quantifying “culture” (DiMaggio, Nag, and Blei 2013; Mohr and Bogdanov 2013). I use 12,682 newspaper articles from different states to measure the meaning of the foreclosure crisis in each state.

States do not adopt policies in a vacuum, especially in the midst of a national economic crisis. Thus, the analysis also considers the influence between states (e.g. Soule and Zylan 1997; Vasseur 2014). Previous research suggests that, particularly in uncertain situations, social actors will learn from or mimic what others are doing (Hall 1993; DiMaggio and Powell 1991). However, social actors are generally not influenced by just anyone, they are influenced by those who are similar to them in meaningful ways. Although “cultural linkages” have been theorized as an important aspect of diffusion among social actors, this has proven difficult to test (e.g. Strang and Bradburn 2001). This is because of the difficulty of measuring and quantifying relevant cultural components. Previous research on diffusion of policies and practices among states tends to focus on what might be called objective factors of similarity between states; factors such as population level, the proportion of immigrants, and fiscal capacity, among others (e.g. Tolbert and Zucker 1983). Strang and Meyer (1993), however, theorize that “diffusing practices and adopter identities are rich in social and cultural meaning” and, thus, that diffusion

is most likely among social actors that are “culturally” similar with regard to the issue at hand (487). I test this by comparing states’ construction of the foreclosure crisis and estimating the extent to which a similar understanding of the crisis creates a cultural pathway for diffusion of foreclosure prevention policies among states.

STATE ACTION DURING HOUSING MARKET CRISES

Comparisons between the Great Depression and the Great Recession abound, not least in the similarities of the housing market distress experienced during both crises (e.g. Eichengreen 2014; Fishback, Rose, and Snowden 2013). In spite of the similarities of the housing market problems during the two crises, there were major differences in the policy response. At the federal level, for example, the policy response during the Great Depression was far more aggressive (Fishback, Rose, and Snowden 2013). In the 1930s, the Federal Government created and funded the Home Owners’ Loan Corporation (HOLC), which bought and refinanced distressed mortgages (Rose 2011). The Federal Government also created the Federal Housing Administration (FHA) as well as the Federal Home Loan Bank system, among other new initiatives.

At the state level during the Great Depression, some states adopted foreclosure moratoria. Such a move was controversial at the time because, some argued, forced foreclosure moratoria would increase the cost of credit for future borrowers (Sloan 2008). Nevertheless, during the Great Depression, twenty-seven states ultimately enacted moratoria. In spite of similar warnings of negative side effects of government intervention in the housing markets during the Great Recession, thirteen states instituted similar stays on foreclosure proceedings and modification requirements. Seven additional states enacted spending policies to help current homeowners refinance or meet mortgage payment obligations. See table 1.

Table 1. States Passing Spending or Modification Foreclosure Prevention Policies

State	Type of Policy	Date	State	Type of Policy	Date
Alabama	-	-	Missouri	-	-
Alaska	-	-	Montana	-	-
Arizona	-	-	Nebraska	-	-
Arkansas	-	-	Nevada	Modification	July 2009
California	Modification	July 2008	New Hamp.	-	-
Colorado	Modification	June 2008	New Jersey	Spending	Dec. 2008
Connecticut	Spending	Nov. 2007	New Mexico	-	-
	Modification	July 2008	New York	-	-
Delaware	Spending	2007	N. Carolina	Spending	2007
Florida	-	-	N. Dakota	-	-
Georgia	Modification	May 2008	Ohio	-	-
Hawai'i	-	-	Oklahoma	-	-
Idaho	-	-	Oregon	-	-
Illinois	Spending	Feb. 2008	Pennsylvania	Spending	Oct. 2007
Indiana	-	-	Rhode Island	-	-
Iowa	Modification	March 2009	S. Carolina	-	-
Kansas	-	-	S. Dakota	-	-
Kentucky	-	-	Tennessee	-	-
Louisiana	-	-	Texas	-	-
Maine	Modification	June 2009	Utah	-	-
Maryland	Modification	April 2008	Vermont	-	-
Massachusetts	Spending	July 2007	Virginia	Modification	April 2008
	Modification	Nov. 2007	Washington	Modification	Oct. 2009
Michigan	Modification	May 2009	W. Virginia	-	-
Minnesota	Modification	June 2009	Wisconsin	-	-
Mississippi	-	-	Wyoming	-	-

POLICY DEVELOPMENT: THEORY AND EXPECTATIONS

The housing market collapse began to unfold in 2006 when housing prices turned, starting a cascade of events. There was a drastic increase in mortgage payment delinquencies and foreclosures. By early 2007, mortgage lenders across the U.S. were filing for bankruptcy. By the summer of 2007, the Federal Government initiated its first policy response – *FHASecure*.

Although the Federal Government would come to implement other programs designed to

stabilize the housing markets, none were particularly aggressive and all failed to be effective (Immergluck 2013).

Some state governments stepped in, taking relatively drastic action to try to address the housing market problems in their state. Many states passed considerably tougher regulations to try to circumvent such problems in the future. But some states went further and tried to prevent additional foreclosures on current homeowners. They did this either by establishing assistance programs that would help borrowers refinance into a better mortgage, or help borrowers make past due payments. Other states required modifications on current mortgages or the foreclosure process itself. It is these actions that are the focus of the current paper. States took these actions in the absence of similarly strong efforts by the Federal Government. Thus, these actions were innovations for the states and not simply explained by coercive forces from above (DiMaggio and Powell 1983).

Characteristics within states

Economic factors alone have been found insufficient to explain policy outcomes (Skocpol 1995). However, they are important. In particular, a state's fiscal capacity, that is the proportion of revenue not already committed, will impact its propensity to implement spending programs. The expectation here being that states with greater fiscal capacity will be more likely to implement foreclosure assistance policies, all else equal. States with limited fiscal capacity may nevertheless have been motivated to do something about foreclosures. Given that the main independent variable in this case is cultural meaning, it is important that no state is precluded by virtue of restrictions regarding balanced budgets, for example. Imposing mandatory modifications is another way for states to address foreclosures without the same budgetary

implications. However, mandatory modifications were controversial and therefore costly politically if not fiscally. States would not have implemented either type of policy lightly. Indeed spending and mandatory modifications were the types of housing policies that the Federal Government was most reluctant to implement (Immergluck 2013).

Another relevant economic factor in this case is the health of the housing market in a given state and the extent of the housing market crisis there. Some states with relatively weak housing markets may have decided to take advantage of this national crisis to try to boost their housing markets. States like California and Florida that experienced a severe drop in housing prices, may also be more likely, all else equal, to try to prevent additional foreclosures from adding even more houses to the market, further exacerbating price declines.

In addition to the economic conditions of states, relevant policy environments have been found in previous research to impact policy-making. Policy environments develop from experiences surrounding related preexisting policies. This is relevant in the current case because before the foreclosure crisis, 21 states had implemented relatively strong anti-predatory lending laws (Bostic et al. 2008). The states that perceived the need to protect constituents from predatory lending before the crisis may be more inclined to protect them from losses during the crisis. Further shaping this policy environment is the fact that the Federal Government preempted portions of these states' laws (Bostic et al. 2008; Ding et al. 2011; Li and Ernst 2007). This political battle may have bolstered these states' inclination to take action (Schneiberg 2007).

However, critics of the path dependency of the policy environment literature point out that such a theory leaves little room for contingency or agency on the part of policy makers (e.g. Schneiberg 2007). The theoretical framework in the current paper, which incorporates the meaning making surrounding the foreclosure crisis, suggests where to look for the contingency

that may move policy making in the direction of paths not suggested by the foregoing policy environment. That is, states with anti-predatory lending laws could still construct the foreclosure crisis as a “necessary market correction,” thus not seeing government intervention as a useful effort.

Another potentially important state characteristic is the racial make-up of states’ populations. There was a documented racial component in the expansion of mortgage credit during the housing boom—beginning in the 1990s, there were dramatic increases in lending to low-income and minority households (Williams, Nesiba, and McConnell 2005). There was also a racial component in subprime lending and foreclosures (Martin and Niedt 2015). Researchers find that black and Hispanic neighborhoods have higher rates of subprime versus prime loans (Mayer and Pence 2008; Rugh and Massey 2010) and that these neighborhoods also experienced the brunt of the foreclosure wave (Rugh and Massey 2010).

Previous research on whether or not social spending policies in general, such as unemployment insurance and welfare, are influenced by racial dynamics in the U.S. is mixed. Some scholars argue that the presence of racial minorities in the U.S. inhibited the development of strong welfare spending policies (e.g. Lieberman 1995). However, others argue that race cannot explain the pattern of social spending in the U.S. (e.g. Skocpol 1995). Most of these studies consider the impact of race on national policies. The smaller set of studies that focus on the state-level, tend to find that does race impact spending policies (Amenta and Poulsen 1996; Soule and Zylan 1997). However, these state-level studies examine policy changes in the early and mid-1990s. Thus, it may be that race would no longer negatively impact a state’s likelihood to implement foreclosure prevention policies in the 21st century.

In the current case, there are competing hypotheses. First, if policy-makers are disinclined to pass policies that are perceived to mainly benefit minorities, then one would expect that states with higher proportions of minority populations would be less likely to implement foreclosure prevention policies. Conversely, if states were aware of the disproportionate rates of subprime and predatory lending experienced by minorities, then one might expect policy-makers to be more inclined to assist those borrowers during the crisis. In this case, states with higher minority populations would be more likely to pass such legislation.

The controlling political party in each state could also impact both foreclosure prevention spending policies and mortgage modification policies. With regard to the former, research finding political parties to be an important component when considering spending policies tends to be focused on European countries where labor or leftist parties may be dominant. In the U.S., scholars consider the Democratic Party to more closely resemble such parties and the Democrats are generally assumed to be more supportive of spending policies than the Republican party. However, within state governments, studies find that it is not quite as simple as “Democrats just taxing and spending more,” though controlling for other factors, Democrats do tend to spend more (Alt and Lowry 1994: 812).

With regard to mortgage modifications, the Republican Party tends to favor “free-market” policies, including for the financial industry. Thus, Republican-controlled state governments may be less inclined to pass non-voluntary modification policies. Yet, once again, what holds at the national level may not be so clear within the states. Especially in the complex realm of the mortgage markets where local consumer markets are intertwined with volatile global investment markets. State-level Republicans may be more inclined to protect constituents over global investors.

Policy studies predicting policy with the theoretical framework outlined above have been very productive (for a review see Amenta, Bonastia, and Carren 2001). However, Burstein (1991) and Campbell (2002) point out that such a framework is incomplete without considering the influence of cultural meaning. Two recent studies using comparative methodologies have shown the usefulness of incorporating cultural meaning. In one, Steensland (2006) shows that conceptions of “worth” influence welfare policies by constituting some people as “deserving.” Steensland makes an important observation in that which people are “worthy” depends, in part, on the meaning of unemployment. During President Kennedy’s administration, when unemployment came to be understood as “structural” unemployment, this shift in meaning created an opportunity for the re-classification of some people as worthy. Skrentny (2006) shows that policy-makers’ perceptions of the meaning of affirmative action social movements and the minority groups themselves influenced affirmative action policies.

The meaning of the situations that policy-makers respond to are generally not inherent in the situations themselves. Indeed, there is considerable uncertainty involved in interpreting unfolding events and responding to them, especially economic crises (Blyth 2002; Hay 1996; 1999). As the foreclosure crisis developed, individual and organizational actors constructed the meaning of these events, creating collective understandings of them. Some understood the “disruptions” in the housing markets to be “necessary market corrections” while others blamed foreclosures on “lending practices that are out there that are indefensible.” These different conceptions of the situation will have different impacts on states’ likelihood to engage in foreclosure prevention policies. If most state officials understood the foreclosure crisis to be rooted in the activities of speculative, irresponsible borrowers, they may be less inclined to help them. On the other hand, if officials consider their constituents to be the victims of predatory

lenders or caught up in financial market volatilities, they may be moved to try to mitigate borrowers' losses.

Inter-State Policy Diffusion

While all of the above state-specific factors are important, state legislatures do not act in isolation, especially during a national crisis. Just as individuals in uncertain situations may look around them to see what others are doing, so state governments will look to other state governments. However, research has shown that actors generally do not look to just anyone, they look to nearby neighbors and otherwise similar others. Soule (1997), for example, finds that student activists adopted new protest tactics when students on other campuses that were similar to their own did. Haveman (1993) finds that firms will follow other firms that are similar and successful into new markets. As a final example, Soule and Zylan (1997) find that U.S. states will copy other similar states in passing welfare restrictions.

For some time, researchers focused on direct relationships between actors as the paths of policy diffusion. Officials from state governments interact with each other directly via their membership in the Council of State Governments, for example. However, more recently scholars have made the case that indirect relationships based on socially meaningful similarities are an even stronger path of diffusion (Haveman 1993; Soule 1997; Soule and Zylan 1997; Strang and Meyer 1993). The difficulty is in identifying the relevant dimension of similarity.

Identifying the relevant dimension is difficult but critical because states may see themselves as similar to specific sets of other states in one policy area but as similar to a wholly different set of states in another policy area. For example, California, New York, and Texas – among the states with the highest populations – may look to each other on urban development

issues but would be less likely to consider each other as models for environmental policies. Indeed, Strang and Meyer (1993: 491) argue that actors must understand each other as “fundamentally similar, at least with respect to the practice at issue.” In the current case, states that attribute similar meaning to the foreclosure crisis will be most likely to imitate each other on foreclosure prevention policies, even if they differ in other important ways such as the leading political party.

There are two ways, then, in which the cultural meanings of the foreclosure crisis can influence states’ actions on foreclosure prevention. First, states’ own understanding of the situation will influence their policy responses. In addition, they can be influenced by other states that have similarly constructed this particular issue.

DATA AND METHODS

I estimate the impact of both state-level factors and the influence of other states on a given state’s adoption rate using Strang and Tuma’s (1993) heterogeneous diffusion model:

$$h_n(t) = h_0(t) \exp \left(\beta_1 X_n + \sum_{s \in S(t)} \beta_2 Z_{ns} \right)$$

where $h_0(t)$ represents the baseline hazard rate at time t , n specifies a focal state that has not passed foreclosure prevention legislation by time t , and $S(t)$ represents the set of states that have passed foreclosure prevention legislation prior to time t . State-level covariates are entered into vector X_n . In the second term, Z_{ns} equals 1 if state s is in state n ’s reference group (what constitutes states’ references group is described below), otherwise Z_{ns} equals 0. Therefore, β_2

captures the effect that the prior adoption of foreclosure prevention legislation by other similar states has on the focal state's hazard of adoption. The heterogeneous diffusion model is an adaptation of the Cox proportional hazards model.

Data and measures

Foreclosure Prevention Policies. The National Governors Association (NGA) compiled a state-by-state list of actions taken on foreclosure prevention. Using this, I have identified states that have taken at least one of two types of policy actions (see Table 1 above). The first type is spending policies in which the funds assist current homeowners. This is distinct from policies that incentivize potential homeowners. An example of this type of policy is Connecticut's "CT Families" refinancing program for subprime borrowers, in which Connecticut initially invested \$50 million.¹ The second type of policy considered is mandatory mortgage modification. This is distinct from policies that encourage modification but ultimately leave the decision to modify with the lenders. An example of a mandatory modification policy is California's imposition of a 90-day stay of foreclosure proceedings.² States would not have implemented either type of policy lightly. Spending policies are almost always controversial and mandatory modifications were also controversial because they are government interference in markets.

Measuring culture. While there has been rich theoretical development in the sociology of culture (Spillman 2002), previous empirical studies examining theoretical cultural concepts and policy have tended to be qualitative or small-N comparative (e.g. Steensland 2006; Skrentny

¹ For more information on this program, see the State of Connecticut's webpage: <http://www.ct.gov/dob/cwp/view.asp?a=2245&q=398720>.

² For the text of California's law see: http://www.leginfo.ca.gov/pub/07-08/bill/sen/sb_1101-1150/sb_1137_bill_20080708_chaptered.html.

2006). A different methodological approach within cultural studies has emerged that takes advantage of “big data” sources, for example, the massive amount of text produced by newspapers, and uses computational approaches such as topic modeling (Bail 2014; DiMaggio, Nag, Blei 2013; Mohr and Bogdanov 2013; Monroe and Schrodtt 2008). Topic models allow researchers to systematically and inductively code and quantify large amounts of text by using algorithms that iteratively sample from the body of text and identify groups of words that consistently co-appear together as “topics.” These models have successfully classified large bodies of academic articles, literature, and newspaper articles (Blei 2012; DiMaggio, Nag, Blei 2013; Jockers and Mimno 2013).

I collected newspaper article text for the current analysis using Lexis-Nexis academic. Karch (2007) argues that the agenda setting process is affected by newspaper coverage because coverage indicates to policymakers that a particular issue is important to voters. The ideal textual data for this study would be legislators discussing the housing market situation and debating legislative proposals to deal with it. However, in order to be included in the statistical analysis, these data would need to include all legislative discussions and debates across the entire analysis period for all fifty states, including those that did not result in enacted legislation. It would take a prohibitive amount of time to collect these data. I did collect legislative discussions and debates on enacted legislation and examined them to ensure that discussions reflected similar topics and therefore meanings of the foreclosure crisis as the topic modeling identified in the newspaper data. I share some of these data below.

The examination of these legislative discussions also provided direct evidence that legislators are indeed influenced in their understanding of the problem by what they read in newspapers. For example, one Arizona House member who was advocating for forcing mortgage

companies to modify mortgages said: every economist talking about this problem that I have read about, says that our economy in Arizona will not recover until we curb our foreclosure rate.

Thus, I searched for articles that had the words “foreclosure” or “foreclosures” in the headline of the article. I limited the articles to those that were published between 1/1/2007 and 12/31/2009. Finally, I conducted this search repeatedly for each state using Lexis-Nexis’s tool for specifying geographical areas. This tool actually works by attributing a particular article to a given state if the state name appears in the article rather than attributing articles to states based on the publication source. I manually checked articles attributed to more than one state and assigned them to the correct state. For example, an article published by *The Augusta Chronicle*, one of Georgia’s newspapers, may mention that Georgia, Florida, and California’s foreclosure rates have increased. Lexis-Nexis would attribute this same article to all three states. I corrected these mis-attributions manually.

To code and quantify these text data, I use Latent Dirichlet Allocation (LDA), which is the simplest and most commonly used model in the topic models family (Blei 2012). In order to implement LDA, a researcher must have a collection of texts, usually called a corpus. The corpus must be separated into different “documents” because the model looks for words that consistently co-appear together within the separate documents. When executing LDA on a set of books, for example, researchers often separate the books into paragraphs that are then the “documents” (e.g. Jockers and Mimno 2013). When working with shorter texts, like newspaper articles (e.g. DiMaggio, Nag. Blei 2013), analysts often leave the original article as the separate documents. I follow this convention in the current analysis, using each newspaper article as a separate document. The model looks for words that consistently co-appear together in different articles.

The corpus, then, constitutes the observed data, i.e., words within documents, which the model uses to estimate the “distributions over words”—the whole set of topics in the corpus; and the “distributions over topics”—the topics that each document is “about.” The words in the corpus are assigned to different topics with varying probabilities. Words that have a high probability within a given topic are those words that are most likely to occur with the other words in that topic. A topic about the subprime crisis will have words like “mortgage” and “subprime” assigned to it with a high probability. While a topic about bankruptcy will have words like “law” and “bankruptcy” assigned to it with a high probability. In addition to identifying the topics that constitute the corpus, the model solution also indicates the topics that make up each document. These distributions indicate the proportion of words in each document that come from given topics. Thus, a document with 90% of its words from the bankruptcy court topic is 90% “about” bankruptcy court.

More technically, the distribution over words (i.e., the topics in the corpus) and the distributions over topics (i.e. the topics constituting documents) are hidden random variables in a hierarchical probabilistic model. LDA approximates the conditional distribution of those variables, given the observed data (Blei 2012). LDA does this by simultaneously working to meet two estimation goals: 1) allocating the observed words in each document to only a few topics and 2) establishing topics that have only a few words in them with a high probability. If the solution allocates only one topic to a document, meeting the first goal, then not all of the document’s words can occur in the topic with a high probability, thus violating the second goal. In order to meet the second goal, the words in the document must be assigned to several topics but the words cannot be allocated to very many topics without violating the first goal. This

tension between these two estimation goals is key to LDA discovering useful topics (Blei 2012; DiMaggio, Nag, Blei 2013).

I followed several common procedures for processing the text before running the topic models. I removed all numbers, punctuation, and “stop” words—commonly occurring words such as “the” and “and.” I also stemmed the words. This means that, for example, the words “mortgage” and “mortgages” would both be changed to the root term “mortgag.” I removed the most sparse terms, meaning terms that occurred 0 times in 99% of the documents. This makes the computation more efficient without having any substantive effect on the results, as terms that do not appear in most of the documents are not consistently co-occurring with other terms (Griffiths and Steyvers 2004). After this processing, there were 2,066 unique terms distributed with various frequencies among the 12,682 documents.

An important decision in specifying a topic model is how many topics the model should discover. Analysts should increase or decrease the number of topics specified in the model depending on whether they are looking for general topics or very fine-grained differentiations in topics.³ As the point of topic models is not to estimate true population parameters, there is not a “correct” number of topics that must be determined but rather a useful number that reveals interpretable topics (Blei 2012; DiMaggio, Nag, Blei 2013).

I ultimately specified a model with 6 topics, after comparing results from models with topics varying from a minimum of 2 to a maximum of 25 topics. An important distinction for the current analysis is between discussions of the problem versus discussions of particular legislation already being considered. The latter is more about the framing of a policy while the argument in

³ The author thanks David Mimno for explaining this point.

the current article is that the understanding of the problem itself will influence the type of solutions developed in response. Thus, I chose the LDA solution with the fewest number of topics that differentiated between the two types of discussions.

Table 2. Top 30 terms in topics from 6-topic LDA model

Topic 1 Legislation	Topic 2 Administrative	Topic 3 Foreclosure data	Topic 4 Foreclosure - crisis	Topic 5 City development	Topic 6 Foreclosure - market
foreclosur	properti	file	said	said	foreclosur
said	deed	foreclosur	foreclosur	properti	percent
court	counti	percent	mortgag	citi	said
case	record	rate	loan	foreclosur	year
attorney	said	unit	homeown	year	counti
state	secur	hous	help	million	sale
law	sale	year	peopl	home	home
mortgag	court	month	program	sale	number
bank	offic	notic	hous	build	state
lender	tax	realtytrac	payment	owner	rate
file	lien	receiv	lender	foreclos	month
judg	clerk	auction	year	develop	market
homeown	lot	new	borrow	hous	quarter
requir	mortgag	report	work	market	increas
firm	book	bank	home	counti	report
loan	date	nation	state	neighborhood	nation
process	attorney	area	make	bank	realtytrac
legal	parcel	accord	servic	real	accord
servic	subject	default	month	valu	properti
general	follow	juli	rate	estat	hous
foreclos	locat	properti	famili	buyer	area
lawyer	note	increas	credit	tax	file
counti	law	april	counsel	buy	mortgag
settlement	land	home	subprim	work	price
action	debt	highest	financi	new	drop
new	provid	repossess	time	time	averag
claim	notic	ago	feder	sell	declin
mediat	default	citi	problem	say	new
say	describ	includ	new	auction	lender
offic	sold	paso	modif	just	notic

The model with 6 topics resulted in separate problem and legislation topics and a topic that coherently represented discussions of residential foreclosures that find fault with lenders, express sympathy with borrowers, or discuss the necessity of generally assisting borrowers. (Table 2 shows the top 30 terms from the 6 topics.) Topic 4, which I labeled “Foreclosures – Crisis,” reflects this type of discussion of foreclosures. For example, consider this quote from an article from a Massachusetts publication from July 2007 that was 77% about Topic 4: “People are losing their homes because of the lending practices that are out there that are indefensible.” An article that is 77% about a topic means that, most likely, 77% of the words in the article came from the words that constitute the topic.

For the analyses below, I first calculate the average monthly percent that a state’s articles were on the Foreclosures – Crisis topic. I do this because the observations are state-months. I then calculate a one-month lagged, seven-month rolling mean of the monthly average on that topic. I lag the measure because I assume that it takes some time for discussions of the problem to have an effect on legislation. I use a rolling mean because I assume that any effect of problem discussions would not immediately dissipate. Finally, I create a dummy variable that equals 1 if the one-month lagged rolling mean is greater than thirty percent and 0 otherwise. I do this because the nature of LDA is such that each newspaper article is estimated to have some percent of its words from each topic, however minuscule that percent may be for some articles. A careful reading of several articles indicates that articles that are at least thirty percent about the Foreclosures – Crisis topic are recognizably about that topic. Thus I use thirty percent as a meaningful threshold.

In the examination of legislature debates, I looked for discussions that reflected (as with Topic 4 in the newspaper data) faulting lenders, sympathizing with borrowers, and discussing the

need to assist borrowers. The purpose of this examination is to confirm that legislators discussed the housing market problem in their state in similar ways as the states' newspapers did. For example, the Illinois legislature's debate over the spending bill they enacted in 2008 (see Table 1) included the following excerpt: It is the ARM [adjustable rate mortgage] that is under three years [adjusts to a different interest rate within the first three years of the repayment schedule] that has created the problem with predatory lending. ... Making fees and putting people in and out of products that are not suitable for the individual customer.

Economic condition. Following Soule and Zylan (1997), I use a measure of states' fiscal balance. That is, revenue minus expenditures divided by revenue. This is a measure not just of states' fiscal capacity but also takes into account how much spending states are already involved in. These data come from the 2007 – 2009 U.S. Census Bureau's Annual Survey of State Government Finances.

Housing Market Collapse. For this measure, I use the Federal Housing Finance Agency's (FHFA) House Price Index. This index considers single-family house prices based on repeat sales or refinancings. As this is a standardized index rather than absolute house prices, the values are comparable across states. I calculate the change in the housing price index for a given state from the year prior.

Policy environment. I use Bostic et al.'s (2008) designation of states with anti-predatory lending laws. These authors did a comprehensive assessment of states' lending laws. They ranked the strength of the laws based the types of loans that were covered, the types of questionable practices that they restricted (for example balloon payments), and the strength of the enforcement mechanisms. Based on their systematic ranking, twenty-one states had average or above-average anti-predatory lending laws in place before the crisis.

Race. As a measure of the racial composition of states, I use the U.S. Census Bureau's American Community Survey (ACS), 5-year average estimates of the proportion of white, black, and Hispanic populations in each state.

Political Party Control in State Legislatures. I use data from the Council of State Governments' Book of the States for the number of Republicans and Democrats making up each state legislature during each year from 2007 through 2009. I calculate the proportion of Republicans and Democrats in each chamber of states' legislatures and create a dummy variable that is equal to 1 if the chamber is greater than fifty percent Republican and 0 otherwise.

Diffusion measures. I include two diffusion measures in the following analysis. In one measure, I determine the number of prior states within geographic regions that have passed foreclosure prevention legislation. Previous research finds fairly consistent evidence of spatial dependence within geographical regions in legislation adoption (Maggetti and Gilardi, 2016). I use the seven geographic regions that the Bureau of Economic Analysis uses: New England, Mid-East, Great Lakes, Plains, South East, South West, and Far West. The second diffusion measure captures the number of other states that have passed foreclosure legislation that also similarly discussed the foreclosure crisis (i.e. states' newspaper articles that are, on average, similarly either high ($> 30\%$) or low ($< 30\%$) on the Foreclosure – crisis topic). Table 3 shows descriptive statistics for all of these measures.

Table 3. Summary of State-month level economic, political, and demographic characteristics

Percent with anti-predatory law ^a	43%
Percent Republican controlled	40%
Mean fiscal balance ^b	-.21
Mean percent race	
Non-Hispanic black	10%
Latino	10%
Non-Hispanic other	7%
Non-Hispanic white	73%
Mean number of prior laws	
Region	1
Cultural group	6
Percent state-months discussing problem	42%

^a Percent refers to the percent of state-months in the sample

^b fiscal balance = (total revenue – total expenditure) / total revenue

RESULTS

Before presenting results from the event history analysis, I show the relationship between the prevalence of the Foreclosure – crisis topic in states' newspaper articles and passing foreclosure prevention legislation during the crisis in each state. In Figure 1, the dots show the rolling mean percent of an article in a given state on the Foreclosure – crisis topic across time (from July 2007 to October 2009). The vertical line in some states indicates when they passed foreclosure legislation. The panels for the states in the figure are laid out in roughly geographical space and the dots are colored according to the geographical region each state is in. Nearly half (nine of twenty) of the foreclosure prevention measures were passed by New England or Mid-East states.

This figure shows that there is variation across states in whether or not they refer to the developing foreclosure problems in the way reflected by the Foreclosure – crisis topic. There are several states, for example Arkansas and Delaware that never discuss the crisis in the terms of

the Foreclosure – crisis topic. In other states, for example North Carolina, over forty percent of each article (on a rolling mean basis) discusses events in the terms of the Foreclosure – crisis topic. Fourteen of the nineteen states that passed legislation experienced newspapers publishing articles constituted in large part by the Foreclosure – crisis topic.

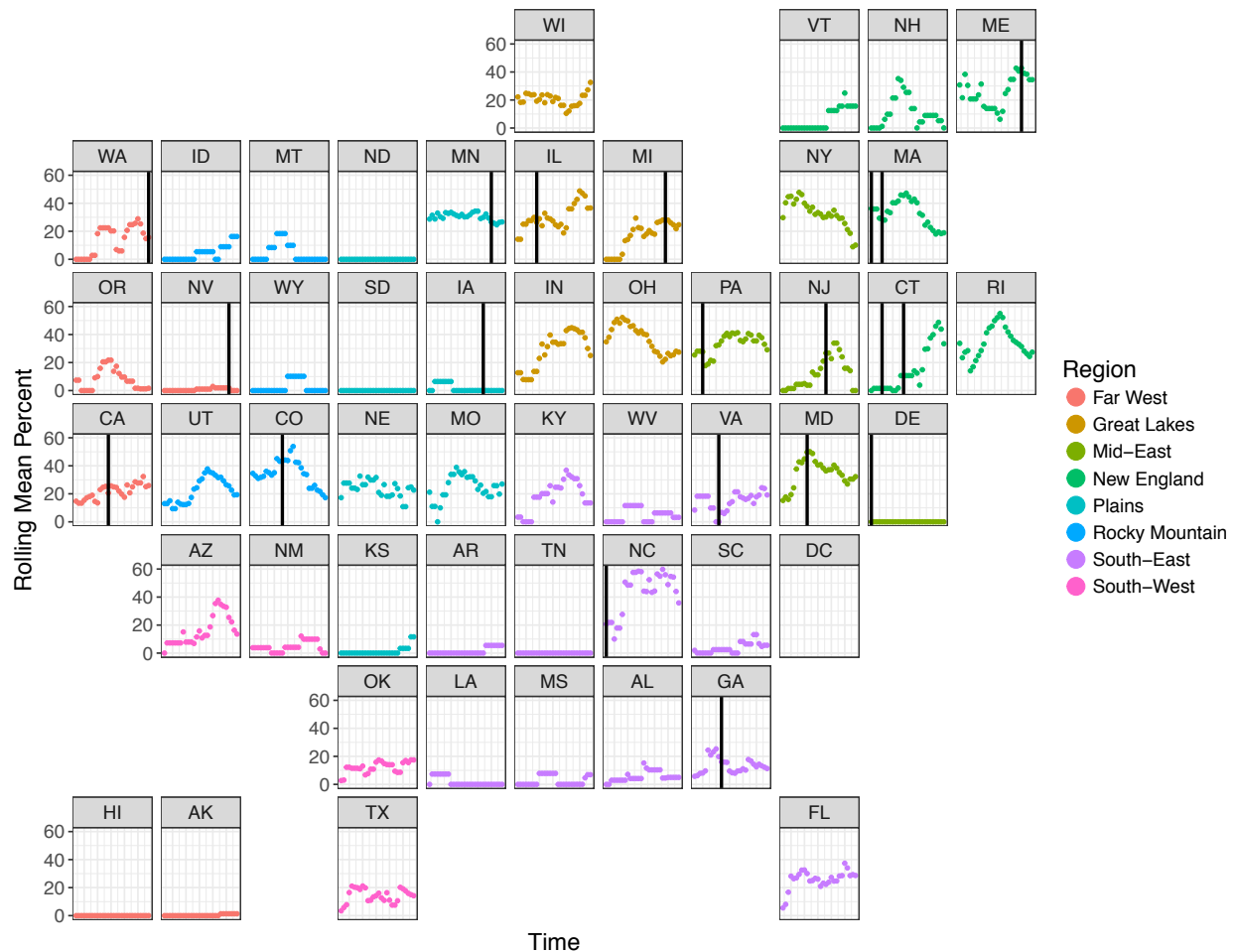


Figure 1. Foreclosure–crisis topic across time by state and time that some states passed foreclosure prevention legislation. The dots indicate the seven-month rolling mean percent of the foreclosure-crisis topic constituting a state’s newspaper articles. The colors of the dots reflect the geographical region of the state. The vertical line in some states’ panel indicates the time when the given state passed foreclosure prevention legislation.

This is particularly intriguing in states such as Georgia and Pennsylvania with Republican-controlled state legislatures who nevertheless passed aggressive foreclosure prevention policies. Also noteworthy is that states in the South-East region, a region in which few states passed foreclosure prevention legislation, the three states that did, had a relatively high percent of their articles constituted by the Foreclosure-crisis topic.

Table 4. Cox Proportional Hazards Model Estimates of the Passage of Foreclosure Prevention Legislation Among U.S. States, July 2007 to October 2009

Variable	Model 1	Model 2	Model 3	Model 4
Foreclosure – crisis (0 = less than 30%)		1.078*	1.075*	1.184*
		(0.504)	(0.499)	(0.519)
Anti-predatory law (0=no law)	0.295	0.0332	0.0399	0.211
	(0.407)	(0.354)	(0.364)	(0.500)
Fiscal balance	0.666	1.000	1.007	1.014
	(0.687)	(0.720)	(0.720)	(0.594)
Housing price index change	-0.0301*	-0.0266*	-0.0268*	-0.0254*
	(0.0126)	(0.0125)	(0.0128)	(0.0123)
Republican controlled (0 = Democratic)	-1.313*	-1.411*	-1.424*	-1.557*
	(0.587)	(0.575)	(0.576)	(0.649)
Race				
Percent Black	0.884	1.243	1.249	2.266
	(1.790)	(1.704)	(1.705)	(2.080)
Percent Latino	-1.172	-1.603	-1.727	-2.162
	(2.328)	(2.386)	(2.643)	(2.918)
Percent Other	-2.250	-1.654	-1.779	-2.149
	(1.844)	(2.013)	(1.999)	(2.080)
Number of prior laws in region			-0.0326	-0.164
			(0.187)	(0.273)
Number of prior laws in cultural group				0.157
				(0.116)
State-months (N)	1,372	1,372	1,372	1,372

Robust standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05

Results from the heterogeneous diffusion model in an event history framework are reported in Table 4. I use the Cox proportional hazards model to test the effect of the meaning of

the foreclosure crisis on the policies developed in response, controlling for other important influences. The model compares states that adopt a foreclosure prevention policy with those that do not at different instances.

Model 1 in Table 4 includes covariates identified in previous work to impact policy adoption. The policy environment as measured by tough anti-predatory lending laws before the foreclosure crisis does not significantly impact a state's risk of adopting a foreclosure prevention policy. This lack of an effect of the policy environment is contrary to previous work. In this case, it may be that this particular operationalization of the policy environment—anti-predatory lending laws—would be predictive of policies for tougher lending standards going forward, which many states did enact during the foreclosure crisis. However, tougher lending standards may not necessarily translate into rescuing borrowers who have already gotten themselves in trouble. This may be why there is not a significant effect for anti-predatory lending laws here. States' fiscal balance also is not found to have a significant effect. The most likely reason for this finding is because the foreclosure prevention policies considered in this analysis include mandatory mortgage modifications, which do not require spending by the states. The racial composition of states' population also does not have a significant effect. In Model 1, the trend of housing prices does have an effect. For each additional unit of increase in the housing price index from the year prior, the risk that the state legislature would pass foreclosure prevention legislation decreases by 3% (i.e. $1 - \exp(-0.0301)$). Particularly earlier on in the crisis, foreclosures rates in local areas could be skyrocketing even while more aggregate measures of housing market health—such as state-level housing prices—showed no signs of stress. The findings here suggest that policymakers wait to see effects in overall measures their states' housing market health. Republican control of the legislature has a large effect on the risk of

passing foreclosure prevention legislation. A Republican controlled legislature is 73% less likely to pass such legislation.

Model 2 adds the measure of the meaning of the foreclosure crisis, as discussed in states' newspapers. These results suggest that in states where newspapers have discussed the foreclosure crisis as lenders' fault or as borrowers needing help, the legislature is nearly 3 times (i.e. $\exp(1.078)$) as likely to pass foreclosure prevention legislation. The overall health of the housing market in the state continues to have a small but significant effect in Model 2. Controlling for the meaning of the crisis, Republican controlled legislatures are even less likely than Democratic controlled ones to pass prevention legislation: 76% less likely now compared to 73% less likely from Model 1.

Models 3 and 4 add in the diffusion measures. Model 3 adds in the measure of diffusion among states in the same geographical region. The point estimate actually suggests of negative effect, however it is not significant. This is contrary to previous research, which tends to find fairly consistent spatial diffusion effects. A reason for this contrary finding may be that much of the previous work examines diffusion over longer spans of time (e.g. Gray 1973). The mechanism of spatial diffusion is more dependent on interaction, which is less likely in a more constrained timeframe. It is also possible that the mechanisms by which policies diffuse during a crisis vary from those of normal policymaking.

Model 4 adds in the measure of cultural diffusion. This measures the number of prior states whose newspaper articles similarly discussed the foreclosure crisis and that passed legislation. The results show that for each additional state within the cultural group that passes legislation, the risk of a focal state passing legislation increases by 17%, however this is not statistically significant.

DISSCUSSION

This analysis provides a quantitative assessment of the impact of cultural meaning on policy-making. The results show that cultural meaning affects policy adoption, even taking into consideration the extent of the housing market collapse and the partisan makeup of state legislatures.

The financial market crisis peaked in 2008 but the housing market crisis continued to worsen into 2010. There are still pockets throughout the U.S. struggling to stabilize their housing markets. This paper contributes to understanding the policy responses to the foreclosure crises. This is important because the particular form of the recovery, which was shaped by the policy response, has exacerbated inequality in the U.S. (Mian and Sufi 2014; Piketty 2014). The policy response to the housing crisis warrants special attention for two reasons. First, many economists and officials, from all sides of the political spectrum, called for housing policies that would stabilize the housing markets, arguing that a recovery would be difficult without such policies (Blinder 2015).⁴ Second, the U.S. has a successful policy history in dealing with a housing collapse that comes from the Great Depression. During the Great Depression, aggressive efforts established organizations such as the Home Owners' Loan Corporation (HOLC), which research later determined helped stabilize not only homeowners but also banks (Eichengreen 2014). Nevertheless, the Federal government avoided implementing such policies during the recent crisis, as did some state legislatures. However, others states did pass aggressive foreclosure

⁴ Liberal economist Alan Blinder and “deficit hawk” economist Martin Feldstein both called for a program similar to the Home Owners' Loan Corporation (HOLC) that was implemented during the Great Depression. Glenn Hubbard, former Chairman of President George W. Bush's Council of Economic Advisors, also called for government-funded mortgage modification.

prevention policies. Understanding this policy-making episode contributes to our theoretical knowledge of the political processes that led to such divergent policy outcomes.

There are some limitations in the current article. Most significantly, newspaper article coverage of the crisis is not an ideal operationalization of the meaning of the foreclosure crisis among policymakers. Ideally, the data would include a measure of *policymakers'* construction of the problem. Debates within state legislatures over enacted policies are available. However, the data would need to include all legislature debates within the analysis time period, not just those that result in passing legislation. Collecting this complete set of debate text data, across all fifty states, is prohibitively time-extensive. A second limitation in the current analysis is the construction of the cultural groups within which policy diffusion is tested. It may be that the relevant measure of cultural similarity is not simply the presence or absence of a particular problem construction but the presence of different constructions of the problem. Addressing this limitation is possible in future research and one approach is testing the effects of identifying cultural groups based on the prevalence of different topics on the foreclosure crisis.

This contributes to recent work that identifies subtle cultural processes that, ostensibly, are not meant to contribute to inequality, yet ultimately do have considerable consequences (Lamont, Beljean, Clair 2014). For example, Fourcade and Healy (2013) examine the effects of new credit scoring technologies that perpetuate disadvantage by connecting groups of people to higher interest rates and more exploitative loan structures. In the current case, the analysis shows that a construction of the foreclosure crisis as lenders' fault or one in which borrowers should have help, affects whether state legislatures pass policies that prevent foreclosure. Foreclosures wipe out households' net worth. In the recent crisis, certain neighborhoods and borrowers faced disproportionate rates of foreclosure (Rugh and Massey 2010).

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CHAPTER 4. WEALTH AND INEQUALITY IN THE STABILITY OF ROMANTIC RELATIONSHIPS

The “Great Recession” of 2008-2009 raised public awareness about inequality in American society and invigorated a host of scholarly activity into the causes and consequences of extreme and rising wealth inequality (Piketty 2014; Pfeffer, Danziger, and Schoeni 2013). The family is a key institution that transmits inequality across generations, and racial and socioeconomic inequalities in family life have grown markedly over the past half-century (McLanahan 2004; Pfeffer and Schoeni, this issue). Most research has examined how family processes reproduce *income* inequality (Western et al. 2012), but *wealth* may influence the formation and stability of family relationships in distinct ways (Keister 2000: 6-16, 225-229). In this paper, we use longitudinal data from the 1996, 2001, 2004, and 2008 panels of the Survey of Income and Program Participation (SIPP) to offer a comprehensive account of how wealth relates to family stability and how that association varies by relationship type, age cohort, and type and amount of wealth. We also examine both the material and symbolic significance of wealth for relationship stability. We conclude by considering whether wealth inequalities contribute to population-level inequalities in family stability by race and by macroeconomic context.

BACKGROUND

Inequalities in Family Formation and Family Stability

Family structure and family stability are profoundly unequal along the lines of race and class (McLanahan and Percheski 2008; Ellwood and Jencks 2004; Kennedy and Bumpass 2008). These inequalities have grown substantially over the past half-century, contributing to what McLanahan (2004) and others have called the “diverging destinies” of children. There was little

socioeconomic gradient in marriage or childbearing in the 1960s, but today most children of college-educated parents grow up in households characterized by stable married families and stable finances, whereas the children of less-educated parents are increasingly exposed to unstable family and economic situations. Socioeconomically disadvantaged adults are less likely to form marital relationships, more likely to have children outside of marriage, and have less stable relationships than their more advantaged counterparts (McLanahan 2004; Ventura and Bachrach 2000). As a result, the children of married parents spend the vast majority of their childhoods with both parents (84 percent), while the children of unmarried parents can expect to spend just about half (52 percent) of their childhood with both parents (Bumpass and Lu 2000). These patterns also fuel racial inequality in family life, with African American couples significantly less likely to marry or to have stable romantic relationships, and more likely to have children outside of marriage, relative to whites; patterns for Latino families are more variable (Kennedy and Bumpass 2008; McLanahan and Percheski 2008).

The growing educational and racial gradients in family formation and stability are particularly consequential because they overlap with a period of growing income and wealth inequality. Part of changing dynamics in income inequality comes from rising incomes for those in the top decile of the income distribution. Saez (2009) calculated that from the 1940s until the early 1980s, the top decile accounted for just over a third of total income in the US. However, from the early 1980s forward, the percent of income going to the top 10 percent rose such that by 2007, they accounted for fully half of total income. Wealth inequality has also been driven by the top of the distribution pulling away from the rest: the top 0.1 percent owned a staggering 22 percent of total wealth in 2012 (Saez and Zucman 2014). This growth at the top of the income and wealth distributions was accompanied by stagnation and even decline among the lower

quintiles. These trends were exacerbated by the 2008 recession, when median wealth plummeted and wealth inequality increased sharply (Wolff, this issue).¹

Socioeconomic status structures the formation, progression, and dissolution of romantic relationships. Much of the work on family dynamics and economic inequality has focused on education- or income-based measures of inequality (see McLanahan and Percheski 2008 for a review). We argue that wealth is an important but understudied dimension of family relationships. Wealth is not simply a function of income or education (Hurst et al. 1998; Keister 2000). First, wealth is a stock rather than a flow. It is transmitted across generations in very tangible and unequal ways. It buys access to elite social settings like neighborhoods, schools, and colleges (Keister 2000; Oliver and Shapiro 1995; Rauscher, this issue). It also allows families to insure against economic risks in other domains of life, and may serve as a buffer against adverse effects of income volatility on consumption (Fisher et al, this issue). Further, income and wealth are not highly correlated. Although those with long-term, low income may begin to look like those with low wealth, this is not necessarily the case. The very wealthy may have low earnings and support consumption with income from assets (Wolff 1995) and at all income levels, there are large differences in saving and investment (Brimmer 1988). As a result of these important distinctions, wealth may shape the progression and stability of family relationships in distinct and consequential ways.

Wealth and the Progression of Romantic Relationships

The institution of marriage is held in high esteem by Americans of all races and classes (Axinn and Thornton 2000; Thornton and Young-DeMarco 2001), and it is increasingly viewed

¹ There is some debate about exactly how much inequality in income (Armour, Burkhauser, and Larrimore 2014) and in wealth (Bricker et al. 2015) has increased.

as a coveted social status, or capstone, in the life course (Cherlin 2004). Today, most Americans believe that they should have not just steady employment but also some assets – money saved, a car, or even a home—before they marry (Dew and Price 2011; Edin and Kefalas 2005; Gibson-Davis et al. 2005, 2009; Lloyd and South 1996). These prerequisites for marriage—the “marriage bar”—are held by rich and poor alike, but the poor are significantly less likely to be able to realize them (Gibson-Davis et al. 2005). Researchers have used the idea of the marriage bar to explain racial and socioeconomic gaps in entry into marriage. Although wealth figures strongly in qualitative narratives of the marriage bar (Edin and Kefalas 2005), only a handful of studies have examined wealth as an independent component of the marriage bar. These studies find that wealth, particularly homeownership, increases the likelihood of marriage (Lloyd and South 1996; Gibson-Davis 2009), and that racial inequalities in wealth explain a significant part of the racial gap in the decision to marry (Schneider 2011).

Schneider (2011) argued that wealth may influence the decision to marry because of its symbolic value or its use value. Wealth has use value because it can be deployed to boost material wellbeing by mitigating material hardship and insuring against future economic uncertainty (Fisher, this issue; Oppenheimer, Kalmijn, and Lim 1997). The symbolic value of wealth inheres in what wealth signifies to others (Lamont and Molnar 2002; Cherlin 2004). To the extent that marriage has become a status marker, displays of wealth – a big wedding, purchasing a house – signal that the couple has achieved the requisite social status deemed worthy of marriage (Veblen 1973; Zelizer 1997; Cherlin 2004). The decision to hold assets jointly or solely may also hold symbolic meaning within the relationship as a signal of couples’ commitment, independence, or expectations about the future stability of their relationship (Addo and Sassler 2010; Kenney 2004; Treas 1993).

Compared to the accumulation of research on wealth and marriage entry, we know less about how wealth influences the *stability* of marriages. The family stress model predicts that economic hardships lead to feelings of economic pressure, which undermine interpersonal interactions and emotions within marriages, resulting in increased marital conflict (Conger and Elder 1994; Conger et al 1990; Gudmunson et al. 2007). Marital conflict, in turn, is a key predictor of divorce (Amato and Rogers 1997). Economic hardship has been conceptualized in a number of ways--including income, poverty, and indicators of specific hardship experiences like food or housing insecurity--and the associations with marital distress are robust to the specific indicator of hardship that is used (Conger et al. 2010).

Although wealth is moderately correlated with other indicators of socioeconomic status, it is not reducible to them, and scholars have only recently begun to untangle the unique effects of asset and debt accumulation on marital satisfaction and divorce (Dew 2011). Liquid assets (which can be converted to cash relatively easily) and illiquid assets (houses, cars, property) could promote marital stability because couples can draw on these assets to buffer against transitory shocks to income, which could reduce the marital strain that tends to accompany economic shocks. There may also be symbolic benefits to asset holdings as well: financial assets are associated with a positive future orientation, enhanced personal efficacy, and greater social participation (Sherraden 1991; Yadama and Sherraden 1996), which could have positive repercussions for interpersonal interactions and commitment within romantic relationships. Joint ownership of assets might signal particularly committed relationships (Addo and Sassler 2010; Treas 1993). Additionally, significant asset holdings might deter divorce because of the transaction costs associated with adjudicating the division of assets in divorce proceedings.

In contrast, predictions about how debt might influence marital stability are less clear. According to life cycle theories of debt, secured debts, like mortgages or educational loans are investments that individuals (or couples) make in order to boost their long-term economic wellbeing.² In the long-term, the financial benefits are expected to outweigh the short-term financial costs (Modigliani and Brumberg 1954). Such debts may have little short-term influence on relationships, and may ultimately promote marital quality and stability in the long term. There may also be a life cycle component to the meaning of secured debts, with greater secured debt at young ages being less troubling than it is at older ages.

Unsecured debts, like consumer or credit card debt, also have ambiguous associations with relationship stability. They may be used to smooth consumption, thus averting financial hardships, and preserving relationship quality and stability. But they may also signal financial hardship or even cause financial hardship directly by diverting household income to debt repayment. Consistent with this latter hypothesis, consumer debt is associated with feelings of anxiety, economic pressure, and marital conflict (Conger et al. 1994; Dew 2005; Drentea 2000).

Variation by Union Type. Virtually all of the prior literature focuses on how wealth shapes decisions to start or end a marriage. Given the retreat from marriage and the concomitant growth of cohabitation over the past half century (Lundberg and Pollack 2013), it is important to understand whether economic forces influence the stability of cohabiting unions in the same way they influence the stability of marriages. There are competing hypotheses. On one hand, ending a

² During the recent housing boom, this relationship between secured debt and long-term economic wellbeing may have been more tenuous as homeowners increasingly cashed in home equity to finance consumption. We thank a reviewer for pointing this out. This became more prevalent beginning in 1999 (Brown et al. 2010). We confirm that relationships between secured debt and the likelihood of relationship dissolution are not significantly different for respondents in the 1996 and 2008 SIPP panels.

marriage has greater symbolic and financial costs than ending a cohabiting union. Divorce is a legal procedure that requires retaining a lawyer and undergoing court-mediated division of assets and belongings, which can be a lengthy, costly, and emotionally painful process. Divorce also has symbolic costs, as partners lose their place in a legally recognized kinship system and the support that it provides. Thus, one might predict that married couples will be less likely to end their relationships in the face of low or declining levels of wealth than cohabiting couples, net of other economic characteristics.

On the other hand, given the “marriage bar” standards described above, married couples might be *more* responsive to wealth when deciding to end relationships than cohabiting couples. If marriage is a coveted social status that signifies that a couple has “made it” financially, perhaps married couples will be more likely to break up relative to cohabiting couples when adverse economic conditions cause them to fall below the “marriage bar.” In fact, qualitative researchers have found that couples do not hold the same standards for their cohabiting relationships as they do for marital relationships, and they tolerate adverse economic and interpersonal conditions in cohabitation that they say they would not tolerate within marriage (Edin and Kefalas 2005). Indeed, research examining the relative importance of economic conditions across union types has found that socioeconomic factors are more important predictors of relationship stability for marital unions than for cohabiting unions (Tach and Edin 2010).

Racial Inequality. There are large racial differences in the formation and stability of marital relationships. African American couples are less likely to enter marriage and have less stable marriages than white couples, even taking into account differences in economic characteristics such as income and employment (Kennedy and Bumpass 2008; McLanahan and

Percheski 2008). Since racial inequalities in wealth are stark (Oliver and Shapiro 1995; Conley 1999; Bucks, Kennickell, and Moore 2006; Killewald and Bryan, this issue), if wealth shapes the progression of romantic relationships via the mechanisms identified above – serving a use value by buffering financial hardships and/or serving a symbolic value by signaling the achievement and maintenance of the “marriage bar” – racial wealth gaps might explain some of the racial inequality in the stability of family relationships. Schneider (2011) found that including measures of wealth as use value and symbolic value in models of first marriage reduced the black-white gap in marriage by about 30 percent, which was more than conventional economic covariates like employment and income explained. We know less about whether differences in wealth can help to explain racial gaps in the stability of romantic relationships *after* they form.

Macroeconomic Contexts and Relationship Instability

Macroeconomic downturns--characterized by some combination of high unemployment rates, stock market volatility, falling GDP, and declining housing values--have the potential to shape the economic wellbeing of large segments of the population, with cascading effects on family dynamics. Under normal macroeconomic conditions, we might expect family-level economic hardship to reduce family stability by heightening economic strain, reducing marital quality, and thereby increasing divorce rates via the mechanisms we delineated above. But the effects of family-level economic hardship may be different during macroeconomic downturns, when many others are experiencing hardship as well. In particular, it may be more costly for couples to dissolve their unions when the economy is struggling (Light and Kuisto 2015; Modestino and Dennett 2013). Couples may face greater constraint in their housing and employment options. They may lack the financial wherewithal set up two different households or

to cover the cost of a divorce proceeding. Couples may also find it more difficult to divide up certain assets, such as homes or stock market holdings, if the value of those assets declined.

These forces may be one reason why researchers have found mixed effects of macroeconomic conditions on divorce rates (Cherlin et al. 2013; Chowdhury 2013; Harknett and Schneider 2012). Divorce rates dropped during the Great Depression (Cherlin et al. 2013), but recessionary periods post-World War II were associated with greater divorce risk (South 1985). Recent estimates from work on the “Great Recession” that began in 2008 found that rising unemployment rates were associated with reductions in the divorce rate (Amato and Beattie 2010; Hellerstein and Morrill 2011; Schaller 2013; Harknett & Schneider 2012; Cherlin et al. 2013; but see Arkes and Shen 2014). However, there is mixed evidence from the Great Recession on the effect of foreclosure rates – another indicator of macroeconomic conditions – and marital stability. Harknett and Schneider (2012) found that higher foreclosure rates reduced divorce rates, but Cohen (2014) found that higher foreclosure rates increased divorce rates.

To our knowledge, research on the macroeconomic contexts of relationship stability has focused exclusively on *marital* stability. Even though the empirical record on marital stability is mixed, we predict that recessions might boost the stability of cohabiting unions, in part because there are financial benefits of pooling incomes that may be particularly necessary during periods of macroeconomic hardship. Individuals are more likely to ‘double up’ (i.e. share living arrangements) during recessionary times (Mykyta and Macartney 2011; Bitler and Hoynes 2015; Cherlin et al. 2013), and cohabitation is one form of doubling up as many cohabiting couples cite economic reasons for moving in together (Sassler 2004).

THE PRESENT STUDY

Our study offers a comprehensive portrait of how wealth relates to family stability. We build on a small but growing body of research in this area by examining how distinct forms of wealth and debt shape relationship stability. First, we disaggregate wealth into distinct components--liquid and illiquid assets, secured and unsecured debt. We expect that assets of all kinds will be associated with an increase in relationship stability, unsecured debt will be associated with a reduction in relationship stability, and secured debt will have no effect on relationship stability, at least in the short term. Second, we consider heterogeneity in the wealth-relationship association. In line with the marriage bar hypothesis identified in prior research, we expect that wealth will be less associated with the continuance or ending of a union for cohabiting couples than for married couples; we therefore predict stronger wealth-stability associations for married couples than for cohabiting couples. We also expect the associations between wealth and relationship stability to be stronger for older couples than for younger couples, in line with life cycle theories of debt.

Second, we explore the practical and symbolic meanings of wealth for relationship stability. Following Schneider (2011), we construct measures of the symbolic and use value of assets and assess their associations with relationship stability. We also examine whether the joint versus sole ownership of assets is related to relationship stability, as prior work has found that joint ownership is associated with greater commitment and higher reported relationship quality.

Finally, we examine whether wealth inequality contributes to population-level inequalities in relationship stability. We focus on two policy-relevant inequalities in this paper: race and macroeconomic conditions. We expect that wealth inequality will explain a significant

portion of the racial gap in relationship stability, net of the standard economic variables of income and education that family researchers typically use to measure socioeconomic status. We also expect that wealth will be a significantly weaker explanation for couples' relationship stability during periods of economic recession than during normal economic times, consistent with the hypothesis that it is harder to dissolve unions during periods of macroeconomic hardship.

DATA AND METHOD

We use data from multiple panels of the Survey of Income and Program Participation (SIPP), starting with the 1996 panel and ending with the 2008 panel, which concludes in 2013. The SIPP is a nationally representative survey designed to provide comprehensive information about the sources of income and government program participation of individuals and households in the United States on a sub-annual basis. The survey is designed as a series of national panels, each lasting three to four years. Together, the panels provide almost-continuous coverage of the U.S. household population since 1996. Unlike other longitudinal surveys, each panel draws a new nationally representative sample, rather than focusing on a single cohort (for which age and period effects are confounded).

In each SIPP panel, every member of the household aged 15 or older was interviewed every four months and asked about the previous four months. All household members aged 15 and older were interviewed directly if possible or by proxy response from another household member otherwise. The SIPP imputes item—and person—nonresponse in all waves (Westat 2001: chapter 4). A household roster indicates the relationship of each household member to the household head and monthly changes in the household roster are assessed at each survey. The

SIPP follows all original sample members (who are present at the first survey wave) regardless of where they move in subsequent survey waves (unless they are institutionalized, in military barracks, or abroad). The SIPP also surveys new individuals who live in households with original sample members over the course of the panel; these new individuals are not followed after they stop living with an original sample member. The SIPP also includes topical modules that are a separate set of questions, asked in addition to the regular core survey questions, during two or three waves of each panel. One set of topical modules asks detailed questions about asset and debt types and values, which we use for this analysis.³

In this article, we construct an analytic subsample of families by identifying the household reference person, who we follow until the survey ends. By following just the reference person, we avoid having both parties to a single union in the data. We restrict the sample to working-age adults, eighteen to sixty-four years old. We further restrict the sample to opposite-sex couples, as there were too few same-sex couples reported, especially in earlier panels, for separate analyses. This results in a sample of 1,555,352 married family observations (61,479 distinct relationships) and 172,034 cohabiting family observations (6,037 distinct relationships) across all four panels of the SIPP. We observe about 6 percent of married couples, and 21 percent of cohabiting couples, ending their unions during the SIPP panels.

Measures

Family Structure and Dissolution. In each month of the SIPP, we assess family structure by identifying adults living in the same household and classifying them as (a) household head,

³ The assets and debt topical modules were asked in the following waves: 3, 6, 9, and 12 for the 1996 panel; 3, 6, and 9 for the 2001 panel; 3 and 6 for the 2004 panel; and waves 4, 7, and 10 for the 2008 panel.

(b) spouse of the household head, or (c) unmarried partner of the household head. Households are coded as “married” if a spouse of the household head is listed on the household roster, or “cohabiting” if an unmarried partner of the household head is listed on the roster. In all of the SIPP panels used in this paper, participants were asked directly about the presence of an unmarried partner. We identify a *marital dissolution* as occurring in the month in which the household reference person’s family structure changes from married to any other household type and either a separation or a legal divorce occurred. We identify *cohabitation dissolution* as occurring in the month in which one of the cohabiting partners no longer lives in the household. There are no direct questions about the start and end dates of nonmarital romantic relationships in these panels of the SIPP, so we must measure the start and end of cohabitations based on the household roster rather than direct questions about relationship status.

Family Wealth and Debt Components. We create four measures of wealth that mirror Czajka, Jacobson, and Cody’s (2003) measures using SIPP (see appendix A for a detailed list of the SIPP variables comprising each measure). First, we calculate the value of all *secured debt*. For most participants this is largely constituted by their mortgage. Some have business debts that are secured by the value of the business. Second, we calculate the value of *unsecured debt*. This is constituted largely by store and credit card debt. Third, we calculate *liquid assets*, which includes saving and checking account balances. Fourth, we calculate *illiquid assets*, which include the values of participants’ car(s) and the value of their house or business.⁴ Information is collected on assets and debts held individually by each adult in the household, as well as some

⁴ The SIPP does not have reliable data on life insurance, defined contribution pensions, annuities or trusts and thus underestimates assets. However, given the SIPP’s complement of other data, it is still an ideal dataset for the current paper (Czajka, Jacobson, and Cody 2003).

assets and debts jointly held by spouses. We add individual and jointly held assets and debts together for each person in the union to create family-level measures. The dollar value of these measures is adjusted to 2013 dollars using data from the Bureau of Labor Statistics inflation calculator. Table 1, on the following page, shows the mean and median values of each measure of wealth by union type and stability. We construct standard deviation measures of each of the asset and debt measures for inclusion in the regression models, so that our coefficients represent how a standard deviation change in assets or debts influences relationship stability.

Table 1. Demographic and Economic Characteristics of Married and Cohabiting Couples in the 1996 – 2008 Panels of the SIPP.

		Married		Cohabiting	
	Full Sample	No Dissolution	Dissolution	No Dissolution	Dissolution
<u>Mean Assets/Debt</u>					
Secured Debt	\$101,000	\$106,000	\$73,000	\$57,000	\$43,000
Unsec. Debt	\$12,000	\$12,000	\$11,000	\$9,300	\$11,000
Liquid Assets	\$114,000	\$122,000	\$51,000	\$40,000	\$30,000
Illiquid Assets	\$268,000	\$282,000	\$175,000	\$138,000	\$107,000
<u>Median Assets/Debt</u>					
Secured Debt	\$63,000	\$70,000	\$20,000	\$0	\$0
Unsec. Debt	\$1,700	\$1,800	\$1,900	\$600	\$1,400
Liquid Assets	\$20,000	\$24,000	\$3,800	\$1,700	\$1,000
Illiquid Assets	\$180,000	\$191,000	\$100,000	\$4,400	\$17,000
Monthly Income	\$7,300	\$7,500	\$5,800	\$5,500	\$4,900
Age	44	45	41	39	37
<u>Relationship Type</u>					
Percent Cohabiting	7	-	-	84	16
Percent Married	93	97	3	-	-
<u>Employed</u>					
Percent Female	37	36	44	44	45
Percent Male	63	64	56	56	55
Households with Children	55	56	60	40	40
<u>Race/Ethnicity</u>					
Percent Black	7	7	10	11	12
Percent Latino	13	12	16	18	13
Percent Other	6	6	5	4	4
Percent White	74	75	68	67	71
<u>Education</u>					
Percent Less than HS	10	9	13	16	14
Percent High School	25	25	29	30	32
Percent Some College	33	33	37	36	38
Percent Four Years	32	34	21	18	16
N of Relationships	76,092	62,242	5,218	6,313	2,319
Relationship-months	1,738,432	1,550,577	63,009	103,539	21,307

Source: Authors' tabulations using SIPP data. Note: statistics weighted using national sampling weights. Monetary values reported in 2013 dollars.

Race and Ethnicity. The SIPP asks directly about the race and ethnic origin of participants. We use the race and ethnicity of the reference person as our measure. We maintain four categories: *non-Hispanic white*, *non-Hispanic black*, *Hispanic*, and *non-Hispanic other race*. Table 1 shows the proportion of the sample in each racial/ethnic category, as well as the share of each group who experience a marital separation (given that they were married) or a cohabiting union dissolution (given that they were in a cohabiting union). Appendix table B shows differences in mean and median wealth and debt accumulation among racial/ethnic groups.

Education. The SIPP asks about years of education completed for the reference person, which we recode into a four-category measure: *less than high school* (less than twelve years of school), *high school* (twelve years of school), *some college* (thirteen to fifteen years of school), and *four-year degree or higher* (sixteen years of school or more). Table 1 shows the proportion of household heads with each level of education, as well as the percentages from each educational category who experience a marital separation (given that they were married) or a cohabiting union dissolution (given that they were in a cohabiting union).

Macroeconomic Conditions. We measure macroeconomic conditions in two ways. First we include a measure of *state-level unemployment*. We use monthly unemployment rates from the Bureau of Labor Statistics' (BLS) Local Area Unemployment Statistics (LAUS) series at the state level. These unemployment data were merged with the SIPP data by month-year and the reference person's geographic location.⁵ Amato and Beattie (2011) find that unemployment tends

⁵ For the 1996 and 2001 panels, there are two geographic areas that combine two sets of states. Those living in North Dakota and South Dakota were coded the same. As were those living in

have the strongest effect when considering unemployment rates within the year or with a year lag. However, unemployment rates rose fairly quickly during the Great Recession's fallout, thus, following Harknett and Schneider (2012), who analyzed a similar time period, we separate the unemployment rates into quartiles and lag the quartiles by three months. As a second measure of the macro-economic conditions we include a measure of *national-level recession* using the National Bureau of Economic Research's (NBER) US Business Cycle Expansions and Contractions data. Our time period of analysis includes the 2001 recession, which lasted from March 2001 until November 2001, as well as the Great Recession, which lasted from December 2007 until June 2009. We merge these data with our SIPP sample by month-year.

Additional Time-Varying Controls. *Total monthly family income* is measured in each month by calculating the sum of the SIPP-generated total person income measures for the reference person and his/her spouse or partner. *Age* is included as the reference person's age in years. We include a dummy variable indicating whether or not the reference person has *children* living in the household. We also include dummy variables for *employment* that indicates whether or not the male partner is employed and whether or not the female partner is employed. In some analyses, we include a dummy variable indicator for whether the couple experienced an income shock, measured as having experienced a reduction in income in the previous month from the month before or not. We also include a measure of material hardship in some analyses. For this measure, we used a SIPP topical module question asked once in the 1996, 2001, and 2004 panels

Vermont and Maine. We averaged the unemployment data for these sets of states and applied the average to respondents living in these areas.

and twice in the 2008 panel⁶, which asks respondents whether they had difficulty meeting any of their essential household expenses, such as mortgage or rent payment, utilities bills, or medical expenses at any time in the past twelve months. We created a dummy variable for whether respondents experienced hardship and applied that variable to the past twelve months of observations for each respondent.

Method

Our analyses are based on event history models of time to union dissolution. We use Cox proportional hazards models to estimate the risk of “failure,” or dissolution, as a function of wealth, debt, and other family characteristics. Respondents who enter the survey period already in a marriage or cohabiting relationship are immediately in the risk set. Respondents who enter unions later during a SIPP panel enter the risk set the first time the union is reported in the survey. We measure time duration as months since union entry (or since the survey began for those already in a union), with participants censored at the end of the survey period. We allow respondents to contribute multiple dissolutions and adjust for multiple relationships with robust standard errors. Thus, our unit of analysis is the relationship-month (rather than the person-month).⁷

Equation 1 specifies the following proportional hazards model:

$$h_n(t) = h_0(t) \exp(\beta_1 X_n) \quad (\text{Eq. 1})$$

⁶ The financial hardship question was asked in the follow waves: wave 8 for the 1996 panel; wave 8 for the 2001 panel; wave 5 for the 2004 panel; and waves 6 and 9 for the 2008 panel.

⁷ Because we are concerned about left censoring in our data, we perform two robustness checks. In one, we restrict the sample to respondents who were asked topical module questions on marriage history. This allows us to measure time since the start of the marriage (rather than since the start of the survey). These questions were asked only regarding marriages, however, not cohabiting relationships. This restriction reduces the sample by 15 percent as it excludes cohabiting relationships. The second robustness check restricts the sample to couples that begin their relationship during the survey period, that is, couples for which we observe the beginning of the relationship.

where $h_0(t)$ represents the baseline hazard rate at time t and X_n represents the vector of independent variables. Because we conduct a monthly survival analysis, but our key asset and debt independent variables are measured only every twelve months in the topical modules, we forward-fill the asset and debt values between topical modules. For example, if a couple responds to the topical module in wave 3, and again in wave 9, we fill in the wave 3 values for waves 4 through 8. This assumes that asset and debt values do not change between waves, but it is better than the alternative of linear interpolation, which is problematic if couples end their unions between waves of the topical modules.

We conduct three main sets of survival analyses. The first set of analyses estimates the effects of total net worth, as well as detailed measures of secured and unsecured debt and liquid and illiquid assets on relationship stability. We then add interaction terms to this model to test whether the associations between wealth and union dissolution differ for married and cohabiting couples. We also test whether they differ for older or younger cohorts. Finally, we examine whether there is non-linearity in the effects of wealth and debt on relationship stability by entering in separate dummy variables for quartiles of the wealth and debt distributions.

In a second set of survival analyses, we explore the symbolic and material meanings of wealth for relationship stability. Following Schenider (2011), we proxy the symbolic value of wealth, meaning that assets serve as a signal to others that a couple has reached the marriage bar and, thus, for whom marriage is appropriate, by testing whether simply holding any assets or debts affects relationship stability. We do this by including dummy variables for whether a couple holds each type of asset or debt. We then test whether joint ownership of the home is associated with relationship stability, relative to just the male partner owning the home, just the

female partner owning the home, or no homeownership. Second, we examine the material role of wealth by considering 1) whether having assets reduces the effect of an income shock on relationship stability, and 2) whether self-reported financial hardships explain the associations between debt and relationship stability.

In a final set of survival analyses, we examine whether wealth contributes to population-level inequalities in relationship stability by race/ethnicity or macroeconomic condition. Specifically, we measure the baseline differences in relationship stability by race/ethnicity and then add in a standard set of economic controls typically used by family researchers, which includes household income, education, and employment. We then test whether adding our asset and debt measures to the model explains any more of the racial-ethnic differences in relationship stability, net of the standard set of economic controls.

Finally, we add our macroeconomic variables of state-level unemployment and national recession to the models. We test whether the associations between wealth and relationship stability vary by macroeconomic context, and whether these effects vary for married and cohabiting couples.

RESULTS

The median couple in our sample has a net worth of \$115,000, but this varies considerably between married and cohabiting couples and by race/ethnicity. The median married couple had about \$68,000 in secured debt, \$1,800 in unsecured debt, and \$23,000 in liquid assets and \$189,000 in illiquid assets. The median cohabiting couple, by contrast, had no secured debt, \$700 in unsecured debt, \$1,500 in liquid assets, and \$24,000 in illiquid assets. These socioeconomic differences are also reflected in the divergent monthly household incomes and

educational distributions for the two groups. Consistent with prior research, we also observe stark wealth inequalities between white and black couples, with Latino and other race couples falling in between (see table A2).

Assets, Debts, and Relationship Stability

Table 2 presents results from a Cox proportional hazards model of union dissolution. Model 1 includes family-level net worth (total assets minus total debts) and our full set of controls. A standard deviation increase in the value of a couple's net worth decreases the risk of union dissolution by 31 percent ($\exp(-0.377)-1$), controlling for other factors such as income, education, race, and employment. Model 2, which also adjusts for controls, tests whether components of net worth are differentially associated with relationship stability. We find that although a standard deviation increase in secured debt decreases the risk of dissolution by 12 percent, unsecured debt is not significantly associated the hazard rate. This is contrary to our predictions that secured debt would not impact short-term relationship stability and that unsecured debt would increase the hazard of dissolution. Liquid and illiquid assets are both associated with relationship stability as predicted, decreasing the risk of dissolution by 49 percent and 17 percent, respectively.⁸

⁸ Because we were concerned about left censoring in our models, we re-estimated models 1 and 2 above on two subsamples to ensure that our results were not driven by the left censoring in our full sample. Appendix table C shows results that count time since the start of marriage for the subsample of respondents who completed the marital history topical module. The table also shows results for the subsample of respondents, married or cohabiting, who entered a relationship during the survey period, for whom we observe the beginning of the relationship during a SIPP panel. The results for these subsamples do not differ substantively from the full sample results.

Table 2. Cox Proportional Hazards Model Estimating Associations of Wealth and Debt with Risk of Romantic Relationship Dissolution

	Model 1	Model 2
Net Worth (sd)	-0.377*** (0.0499)	
Detailed Asset and Debt Amounts (sd)		
Secured Debt		-0.129*** (0.0266)
Unsecured Debt		0.00728 (0.00502)
Liquid Assets		-0.668*** (0.178)
Illiquid Assets		-0.192*** (0.0358)
Income (sd)	-0.0888*** (0.0219)	0.0121 (0.0212)
Male Partner Employed (0=unemployed)	-0.550*** (0.0346)	-0.527*** (0.0344)
Female Partner Employed (0=unemployed)	0.0361 (0.0293)	0.0292 (0.0292)
Race-Ethnicity (0=white)		
Non-Hispanic Other Race	0.321*** (0.0421)	0.258*** (0.0424)
Hispanic	-0.131** (0.0467)	-0.154*** (0.0466)
Other	0.129* (0.0574)	0.108 (0.0576)
Education (0 = Less than high school)		
High School Degree or GED	-0.105* (0.0459)	-0.0764 (0.0458)
Some College	-0.151** (0.0461)	-0.0914* (0.0463)
4-Year Degree or More	-0.578*** (0.0541)	-0.452*** (0.0458)
Age	-0.0455*** (0.00142)	-0.0424*** (0.00149)
Children in Household (0=no children)	-0.441*** (0.0296)	-0.339*** (0.0299)
Cohabiting Relationship (0=married)	0.882*** (0.0762)	0.850*** (0.0758)
Observations	1,738,432	1,738,432

Robust standard errors in parentheses; *** p<0.001, ** p<0.01, * p<0.05; sd= standard deviation. Source: Authors' estimates using SIPP data.

In supplemental analyses, we examined whether there were non-linear effects of assets and debts on relationship stability. To test for non-linearity, we included asset and debt measures

as quartile dummy variables instead of continuous measures. The lowest quartile of each asset and debt measure is the reference category. We find evidence of relatively linear effects of asset holdings and secured debts on relationship stability, with the magnitude of the association increasingly monotonically as we move up the quartiles of the distribution (table A4). We do, however find an interesting nonlinear effect for unsecured debt, with only large amounts of unsecured debt having a significant negative effect on relationship stability. Those in the fourth quartile of unsecured debt, (i.e. those holding the most unsecured debt) have an 8 percent higher risk of dissolution compared to those in the first (lowest) quartile of unsecured debt.⁹

Variation by relationship type and age cohort. Table 3 shows results from a set of models in which we explore how associations between wealth and relationship stability vary by relationship type and age cohort. First, we interacted the relationship-type dummy variable with each asset and debt measure (see table 3, relationship type). Models 1, 2, and 3 show that the associations of unsecured debt, secured debt, and liquid assets with the risk of relationship dissolution do not differ significantly for married versus cohabiting couples. Model 4, however, shows that illiquid assets significantly increase the risk of dissolution for cohabitating couples. We caution that this may be due to small numbers of cohabitating couples with illiquid assets.

⁹ We also separated out the value of a couple's mortgage and home value from these values, since home equity makes up the largest share of most Americans' investment portfolios and their mortgages the greatest contribution to their levels of debt (Wolff, this issue; Killewald and Bryan, this issue). We found that the asset/debt associations described above are not simply a "house effect;" these results hold for assets and secured debts other than homes as well. We also test whether being "underwater" on one's mortgage affects relationship stability, possibly by increasing the costs of dissolution. However, we do not find significant effects.

Table 3. Cox Proportional Hazards Models Estimating Associations of Wealth and Debt with Risk of Romantic Relationship Dissolution by Relationship Type and Age Cohort

	Model 1	Model 2	Model 3	Model 4
Panel A. Relationship Type				
Secured Debt	-0.133*** (0.0267)	-0.129*** (0.0266)	-0.129*** (0.0266)	-0.129*** (0.0266)
Unsecured Debt	0.00734 (0.00500)	0.00696 (0.00521)	0.00729 (0.00502)	0.00727 (0.00504)
Liquid Assets	-0.666*** (0.178)	-0.668*** (0.178)	-0.665*** (0.178)	-0.662*** (0.178)
Illiquid Assets	-0.193*** (0.0358)	-0.192*** (0.0358)	-0.192*** (0.0358)	-0.199*** (0.0364)
Cohabiting Relationship (0=married)	0.945*** (0.0892)	0.850*** (0.0769)	0.808*** (0.135)	0.971*** (0.0904)
Interactions				
Cohabit * Secured	0.233 (0.119)			
Cohabit * Unsecured		0.128 (0.171)		
Cohabit * Liquid			-0.544 (1.362)	
Cohabit * Illiquid				0.284** (0.100)
	Model 5	Model 6	Model 7	Model 8
Panel B. Age Cohorts				
Secured Debt	-0.221*** (0.0358)	-0.129*** (0.0265)	-0.138*** (0.0263)	-0.128*** (0.0280)
Unsecured Debt	0.00672 (0.00501)	0.00807 (0.0291)	0.00727 (0.00498)	0.00720 (0.00494)
Liquid Assets	-0.695*** (0.180)	-0.670*** (0.179)	0.121 (0.283)	-0.671*** (0.190)
Illiquid Assets	-0.195*** (0.0354)	-0.192*** (0.0358)	-0.185*** (0.0350)	-0.198** (0.0591)
40-64 Yrs. Cohort (ref=18-39 yrs.)	0.221*** (0.0497)	0.231*** (0.0494)	0.181** (0.0507)	0.232*** (0.0501)
Interactions				
40-64 Yrs. Cohort * Secured	0.169*** (0.0420)			
40-64 Yrs. Cohort * Unsecured		-0.000967 (0.0294)		
40-64 Yrs. Cohort * Liquid			-1.065*** (0.305)	
40-64 Yrs. Cohort * Illiquid				-0.00718 (0.0599)

N = 1,813,055. Robust standard errors in parentheses; *** p<0.001, ** p<0.01, * p<0.05. Note: Controls (income, employment, race, education, age, children, relationship type) in model, coefficients not shown. Asset and debt amounts in standard deviation units. Source: Authors' estimates using SIPP data.

We therefore cannot reject the null hypothesis that assets and debts function similarly for married and cohabiting couples.

Table 3 shows whether the associations between wealth and relationship stability differ for older and younger age cohorts. Our results here are largely consistent with predictions from a life cycle model of savings and debt. A one standard deviation increase in the amount of secured debt decreases the risk of dissolution by 20 percent for younger cohorts, but only by 7 percent for older cohorts. Thus, secured debt is less protective of relationship stability for older couples than for younger couples. Unsecured debt has little association with stability for any age group. Model 7 shows that liquid assets have an increased effect among older couples. That is, a standard deviation increase in liquid assets among older couples decreases the risk of dissolution by 61 percent ($\exp(-0.121-1.065)$); for younger couples, liquid assets are not significantly associated with relationship stability. The association between illiquid assets and relationship stability does not differ for older and younger cohorts.

Symbolic and Material Meanings of Wealth

Scholars have argued that wealth matters for relationships because of what it symbolizes, apart from its economic value (Schneider 2011; Zeilzer 1997; Cherlin 2004). Ownership of assets, such as home or a car, independent of their value, can serve as symbolic markers of success and status, and researchers have found that these asset holdings matter for entry into marriage (Schneider 2011; Edin and Kefalas 2005). We build on this line of research by testing whether holding any asset or debt (in contrast to assessing the effect of amounts) is associated with relationship stability. The results indicate that simply having some amount of assets and debts is significantly associated with the risk of dissolution compared to not holding any amount of assets and debts, controlling for other factors (see table A5).

The sole versus joint ownership of assets may also be symbolically significant, in that couples who hold their assets—homes, cars, bank accounts—jointly report greater commitment to their relationships and higher levels of relationship satisfaction, which may be the result of greater trust and support. The results indicate that sole homeownership, whether the owner is the woman or the man in the relationship, increases the risk of dissolution by about 60 percent over not owning (see table A5).¹⁰ In contrast to the effect of sole ownership, jointly owning the home decreases the hazard rate by 49 percent over not owning. We therefore find strong support for the symbolic value of asset and debt holdings.

Wealth also has potentially important material value for couples as well. They can liquidate asset holdings or draw on interest to provide extra income, and they can serve as a buffer against unexpected financial insecurities. In order to examine the material meaning of wealth for relationship stability, we ask whether the effect of income shocks on relationship stability was weaker for couples with greater asset holdings to draw upon. We tested this by including an indicator for whether the couple experienced an income shock in the prior month, measured as a negative income change from the month before, and interacting this measure with liquid and illiquid assets (see table A6). A negative income shock increases the risk of dissolution while liquid assets reduce this negative effect, although the coefficient does not reach conventional levels of statistical significance. Illiquid assets do not alter the effect of an income shock in any substantively or statically significant way.

We also examine the possibility that debts are either markers of financial hardship or directly create financial hardship via the cost associated with debt repayment and other fees (see table A6). Consistent with prior research, we find that experiences of financial hardship increase

¹⁰ About 2 percent of our sample lives in a household in which the female partner is the sole owner of the house.

the risk of relationship dissolution significantly. We also find that the financial hardship measure explains 29 percent of the association between large amounts of unsecured debt and relationship stability.¹¹

Wealth and Racial Inequality in Relationships

Researchers have found that socioeconomic differences, measured by income, education, and employment, explain part of the relationship stability gap, but much remains unexplained. We examine whether assets and debts explain part of the black-white gap in relationship stability. Model 1 in table 4 includes only race-ethnicity dummy variables and controls for age, children, and relationship type. This first model shows that black couples are 53 percent more likely to end their relationships than white couples. Model 2 adds in the economic measures that previous research has found decrease this gap: income, employment, and education. Indeed, in this model, the likelihood of dissolution for black couples falls to 41 percent more than for whites, leaving a significant portion of the gap unexplained. Model 3 adds our measures for assets and debts. As these results show, the likelihood of dissolution for black couples is now 29 percent higher than for whites. This suggests that assets and debts reduce the black-white relationship stability gap by about 45 percent, which is about as much as the standard set of economic controls explained. In other words, assets and debts explain a substantial portion of the black-white gap in relationship stability, rivaling that of other standard socioeconomic measures.

We find no significant differences between the relationship stability of white and Latino couples when adjusting only for age, children, and relationship type. However, in model 2, where income, employment, and education are adjusted, Latino couples actually face an 11

¹¹ The models in panel B of appendix table F are estimated on a subset of observations because respondents' answers to the financial hardship question applied to only twelve months of the three to four year survey period, thus many observations could not be used for this analysis.

percent *lower* risk of dissolution than white couples. This reduction in the hazard rate increases to 16 percent in model 3 when adding in assets and debts.

Table 4. Cox Proportional Hazards Models Examining Racial-Ethnic Differences in Relationship Stability

	Model 1	Model 2	Model 3
Race-Ethnicity (0=white)			
Non-Hispanic Black	0.424*** (0.0420)	0.341*** (0.0420)	0.255*** (0.0422)
Hispanic	0.0507 (0.0435)	-0.119* (0.0465)	-0.168** (0.0464)
Other	0.0961* (0.0575)	0.138* (0.0574)	0.0970* (0.0576)
Secured Debt			-0.135*** (0.0263)
Unsecured Debt			0.0141* (0.00501)
Liquid Assets			-0.301*** (0.0518)
Illiquid Assets			-0.219*** (0.0370)
Income (sd)		-0.129*** (0.0216)	-0.00122 (0.0202)
Male Partner Employed (0=unemployed)	-0.686*** (0.0325)	-0.545*** (0.0346)	-0.510*** (0.0344)
Female Partner Employed (0=unemployed)	-0.116*** (0.0284)	-0.0233 (0.0293)	-0.0208 (0.0292)
Education (0=Less than HS)			
High School Degree or GED		-0.117** (0.0460)	-0.0835* (0.0458)
Some College		-0.171*** (0.0461)	-0.107** (0.0461)
4-Year Degree or More		-0.619*** (0.0538)	-0.466*** (0.0539)
Age	-0.0501*** (0.00134)	-0.0483*** (0.00136)	-0.0424*** (0.00145)
Children in Household (0=no children)	-0.427*** (0.0293)	-0.441*** (0.0296)	-0.394*** (0.0299)
Cohabiting Relationship (0=married)	0.950*** (0.0764)	0.888*** (0.0765)	0.833*** (0.0761)
Observations	1,738,432	1,738,432	1,738,432

Robust standard errors in parentheses; *** p<0.001, ** p<0.01, * p<0.05. Asset and income variables measured in standard deviation units. Source: Authors' estimates using SIPP data.

Macroeconomic Conditions and Relationship Stability The theoretical predictions for how macroeconomic conditions shape divorce are mixed, with some theories suggesting that

adverse conditions would reduce marital stability while others suggest that adverse conditions would actually promote marital stability by making it more costly to divorce. The theoretical predictions for cohabitation are clearer, however, suggesting that cohabitations would be more stable in times of macroeconomic hardship.

In this final set of results, we consider the effects of macro-economic conditions on relationship stability and examine whether the effects of macroeconomic conditions differ for marriages and cohabitations. Models 1 and 2 in table 5 show that macroeconomic conditions do not attenuate the relationship between assets, debts, and relationship stability as we expected they might.

Model 2 of table 5 shows that couples living in states where unemployment levels are in the second are not at significantly more risk of dissolving their unions than those in states at just the first quartile (lowest unemployment). However, those in states in the third and fourth (highest unemployment) quartile face a 7 and 26 percent higher risk of union dissolution relative to those with the lowest unemployment. National-level recession increases the risk of dissolution by 54 percent. Model 2 adds the wealth and debt measures to the models. These measures do not appear to mediate the association between state-level unemployment and relationship dissolution.

Model 3 interacts the cohabitation dummy variable with the fourth quartile of unemployment dummy variable. The results indicate that there are important differences in macroeconomic effects for married versus cohabiting couples – married couples face an increased hazard rate in poor macroeconomic conditions while cohabiting couples actually face a decreased risk. That is, comparing two cohabiting couples, the couple living in a state with the highest quartile of unemployment rather than a state in the lowest quartile of unemployment is

16 percent less likely to break up ($\exp(0.247-0.417)$). This provides support for the hypothesis that cohabiting relationships are more stable during tough macroeconomic times, while marriages are less stable.

Table 5. Cox Proportional Hazards Models Examine Associations of Macro-Economic Conditions with Risk of Romantic Relationship Dissolution

	Model 1	Model 2	Model 3
Secured Debt	-0.129*** (0.0266)	-0.133*** (0.0262)	-0.133*** (0.0262)
Unsecured Debt	0.00728 (0.00502)	0.00696 (0.00551)	0.00703 (0.00547)
Liquid Assets	-0.668*** (0.178)	-0.681*** (0.180)	-0.682*** (0.180)
Illiquid Assets	-0.192*** (0.0358)	-0.186*** (0.0353)	-0.186*** (0.0353)
National Recession (0=no recession)		0.432*** (0.114)	0.433*** (0.114)
Quartiles of State Unemployment (0= 1 st Q)			
2 nd Quartile		0.0607 (0.0378)	0.0604 (0.0378)
3 rd Quartile		0.0745* (0.0379)	0.0743* (0.0379)
4 th Quartile		0.233*** (0.0379)	0.247*** (0.0382)
Cohabiting Relationship (0=married)	0.850*** (0.0758)	0.835*** (0.0763)	0.955*** (0.0857)
Cohabit * 4 th Quartile of Unemployment			-0.417* (0.169)
Observations	1,738,432	1,738,432	1,738,432

Robust standard errors in parentheses; *** p<0.001, ** p<0.01, * p<0.05

Controls: income, employment, race, education, age, children are in all models.

Asset and income variables measured in standard deviation units. Source: Authors' estimates using SIPP data.

DISCUSSION

Our analysis provides a nuanced portrait of how wealth is related to the stability of family relationships, exploring how this association varies across types of debt and types of unions. We found that both liquid and illiquid assets are associated with the stability of marital relationships.

Consistent with Schneider (2011), we found evidence that these associations reflected both the material as well as the symbolic values of wealth for relationships. We found suggestive evidence that liquid assets buffered against the adverse consequences of transitory shocks to income. The protective effect of liquid assets was particularly pronounced for older age cohorts, consistent with a life cycle theory of savings. We also found that simply holding any kind of asset is associated with relationship stability, consistent with an interpretation that assets hold symbolic meaning, independent of their actual amount. The joint ownership of assets also appears to have symbolic value for relationships, as we found that joint ownership of a home is associated with relationship stability relative to renting, while sole ownership by either the male or female partner was *less* stable than not owning a house at all.

We found more mixed associations between debt and relationship stability. Large amounts of unsecured debt are associated with a reduction in marital stability, which we found was due in part to the fact that these couples reported greater financial hardship. Unsecured debt may therefore either create financial hardship directly or be a marker for it. Secured debts are associated with an increase in marital stability, however. Secured debts, like mortgages, are investments made to boost long-term wellbeing, which may explain why they are associated with an increase rather than a decrease in stability. This may also explain why secured debt was a stronger predictor of relationship stability for younger couples than it was for older couples. Another possibility for the differences in the strength of the association between secured debt and dissolution for older and younger couples maybe that investment or willingness to take on secured debt provides a stronger signal of maturity within younger couples, as older couples may

have other signals to rely on (Brüderl and Kalter 2001).¹² However, if unsecured debt worked solely as a signaling mechanism, one would expect illiquid assets to exhibit similar differences between older and younger cohorts, which we did not find.

Although theory suggests that wealth and debt shape union stability differently for married and unmarried couples, we found little evidence for this in our analysis. If marriage is protective due to its legal and institutionalized commitment mechanisms, one might predict that married couples would be more likely to stay together in the face of adverse wealth conditions. If, however, couples hold marriage in high esteem, as the ‘marriage bar’ theory suggests, married couples might be *more* likely to break up in the face of asset or debt adversity than cohabiting couples. Contrary to both of these theories, we found that there were no significant differences between married and cohabiting couples in terms of how wealth and debt shaped the stability of their romantic unions. There are several possible reasons for this null finding. First, it could be that both of the theories above are at work and they cancel each other out. Second, there are a relatively small number of cohabiting unions in our analysis and large standard errors around our interaction terms, which means that we cannot rule out potentially meaningful differences among these two types of unions.

Consistent with prior research, we found substantial racial differences in relationship stability: black couples were 53 percent more likely to end their relationships than whites. The conventional socioeconomic measures of income, employment, and education explained a portion of this black-white gap in relationship stability. When we included them in the models, the increased risk of dissolution for blacks relative to whites dropped by 23 percent, to 41

¹² We thank a reviewer for pointing this out.

percent. When we added measures of wealth and debt to the models, they explained a significant additional portion of the black-white gap: the greater relative likelihood of dissolution for blacks drops to 29 percent, which is a further reduction of about 29 percent. Prior research by Schneider (2011) found that wealth measures explained about 30 percent of the black-white marriage gap in marriage entry; here we find that wealth also explains a significant portion of the black-white gap in the stability of relationships after they form. It may be that this reduction in the racial gap in relationship stability is due to wealth having a similar use value within couples of any race/ethnicity – that is, wealth acting to buffer hardships or smooth consumption. However, the ability of wealth to further close the gap may be limited if wealth does not serve the same symbolic value within relationships of all race/ethnicities. Wealth may be unable to have similar symbolic value because different racial/ethnic groups do not have the same access or inclination to accumulate particular assets (Brimmer 1988). For example, black Americans have more difficulty getting a mortgage or getting the same type of mortgage as white Americans (Rugh and Massey 2010). Examining the effect of different types of assets on the racial gap is an important area for future research. Additional research is indeed important, as our results suggest that the black-white wealth divide may have lasting consequences for the intergenerational reproduction of inequality via its effects on family instability, independent of other measures of socioeconomic status.

Finally, we examined the role of macroeconomic conditions on the stability of family relationships. We found that high levels of state unemployment (in the top quartile) were associated with an increased risk of dissolution, relative to periods of low state unemployment. We also examined whether these associations differed for cohabiting unions, predicting that cohabiting unions may be more stable during hard times as this allows for pooling limited

resources. We found support for this in that cohabiters' risk of dissolution was significantly lower in states with high unemployment compared to those in states with low unemployment.

Our analysis has several limitations that readers should keep in mind when interpreting our findings. First, our use of the SIPP data precludes our ability to look at longer-term trajectories of marital instability and wealth accumulation over the entire life course, as each SIPP panel lasts only three to four years. Second, our analysis has focused on wealth as a key *predictor* of relationship stability, but relationship instability is also an important potential cause of declining assets or growing indebtedness; indeed divorce is one of the key antecedents of bankruptcy (Sullivan et al. 2001). Isolating the causal effect of relationship instability on changes in wealth is tricky, as there are a host of unobserved factors that could cause both relationship instability and financial hardship (Fisher and Lyons 2006). This is clearly an important question for future research to disentangle (see Killewald and Bryan, this issue), as it can help to provide more precise estimates of the role of family instability in producing wealth inequality.

Taken together, our results highlight the important yet understudied role of wealth on the stability of family relationships. Much of the prior research on wealth inequality and family processes has focused on how wealth explains gaps in marriage entry; here, we find that wealth plays an important role in shaping marital stability as well. We find that debt and assets are significantly associated with the stability of both marital and cohabiting relationships. The importance of debt and assets remains net of the standard set of socioeconomic controls of education, employment, and income, and the magnitude of wealth effects is often comparable to the magnitude of these standard socioeconomic measures. Furthermore, assets and debts appear to have not only material value for relationships, buffering against income shocks and either creating or ameliorating financial hardships, but also symbolic value. The ownership of assets in

and of themselves can serve as a marker of status, and the joint ownership of assets can signal relationship commitment. Because family instability has adverse consequences for children (McLanahan, Tach, and Schneider 2013), our results suggest that family instability may be one important mechanism through which the intergenerational transmission of wealth inequality operates. As a result, policy interventions that reduce wealth inequality may also serve to reduce inequalities in children's exposure to family instability.

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Appendix A. Content and variable names of SIPP assets and debt survey questions used in wealth / debt measures.

Measures	SIPP Variable Contents	SIPP Variable Name
Unsecured Debt	Credit card or store debt with partner	ealjdab or taljdab
	Credit card or store debt owed by reference person	ealidab or talidab
	Loans owed with partner	ealjdal or taljdal
	Loans owed by reference person	ealidal or talidal
	Other debt owed with partner	ealjdao or taljdao
	Other owed by reference person	ealidao or talidao
Secured Debt	Debt on jointly held stocks or mutual funds	esmjmav or tsmjmav
	Debt on reference person's stocks or mutual funds	esmimav or tsmimav
	Debt on mobile home or lot	tmhpr
	Principle owed on mortgage	tmorlpr (Could be more than one owner. Value applied proportionally)
	Principle owed on rental properties owned with partner	trjpri (Half value applied to both partners)
	Principle reference person owes on rental properties	tripri
	Auto loans	tcarval1, tcarval2, tcarval3 (Value applied proportionally to owners)
	Business debt	tvbde1, tvbde2 (Value applied proportionally to owners)
Liquid Assets	Equity in investments	eoaeq (not asked in 2004 or 2008)
	Amount in joint interest earning account	tiajta
	Amount in reference person interest earning account	tiaita

	Amount in joint checking account	taljcha
	Amount in reference person checking account	talicha
	Amount in joint bonds/US securities	timja
	Amount in reference person bonds/US securities	timia
	Value of joint stocks or mutual funds	esmjbv or tsmjbv
	Value of reference person stocks or mutual funds	esmiv or tsmiv
	Face Value of U.S. Savings Bonds	talsbv
	Market value of IRA account(s)	talrb
	Market value of KEOGH account(s)	talkb
	Market value of 401K	taltb
Illiquid Assets	Value of house	tpropval (Applied proportionally)
	Value of mobile home	tmhval
	Value of other real estate	tothreva (Applied proportionally)
	Value of car(s)	carval1, carval2, carval3 (Applied proportionally)
	Value of rental property jointly held not with partner	trtsha
	Value of rental property jointly held with partner	trjmv
	Value of rental property held by reference person	trimv
	Amount owed for sale business/property	ealowa or talowa
	Principle <i>owed</i> on mortgage	tmip
	Principle <i>owed</i> on mortgage jointly held	tmjp

Business equity

tvbva1, tvbva2

Note: some variable names change between panels.

Appendix Table B. Economic Characteristics by Race/Ethnicity in the 1996 – 2008 Panels of the SIPP

	Non-Hispanic White	Non-Hispanic Black	Hispanic/ Latino	Non-Hispanic Other Race
Secured Debt				
Percent has	73	57	50	62
Mean (if have)	\$149,000	\$125,000	\$143,000	\$189,000
Median (if have)	\$118,000	\$95,000	\$111,000	\$155,000
Unsecured Debt				
Percent has	66	63	53	56
Mean (if have)	\$19,000	\$17,000	\$14,000	\$19,000
Median (if have)	\$7,000	\$7,000	\$5,000	\$7,000
Liquid Assets				
Percent has	91	75	65	86
Mean (if have)	\$152,000	\$52,000	\$38,000	\$107,000
Median (if have)	\$44,000	\$11,000	\$5,000	\$27,000
Illiquid Assets				
Percent has	99	92	91	95
Mean (if have)	\$300,000	\$172,000	\$173,000	\$307,000
Median (if have)	\$205,000	\$111,000	\$94,000	\$203,000
N	1,325,775	129,946	183,205	99,506

Note: statistics weighted using national sampling weights. Values reported in 2013 dollars. Race is the race of the household reference person. Source: Authors' estimates using SIPP data.

Appendix Table C. Robustness Analyses: Cox Proportional Hazards Models on Samples Without Left Censoring

	Marital History Subsample		New Relationship Subsample	
	Model 1	Model 2	Model 3	Model 4
Net Worth (sd)	-0.299*** (0.0446)		-0.243 (0.144)	
Secured Debt		-0.0841** (0.0272)		-0.0765 (0.0584)
Unsecured Debt		0.00542 (0.00575)		-0.112 (0.0801)
Liquid Assets		-0.349* (0.172)		-0.496 (0.277)
Illiquid Assets		-0.110** (0.0332)		0.0206 (0.0635)
Income (sd)	-0.0256 (0.0219)	0.0108 (0.0222)	-0.140** (0.0491)	-0.116* (0.0548)
Male Employed (0=unemployed)	-0.603*** (0.0412)	-0.590*** (0.0412)	-0.228** (0.0742)	-0.221** (0.0758)
Female Employed (0=unemployed)	-0.0583 (0.0348)	-0.0499 (0.0347)	-0.128* (0.0644)	-0.123 (0.0655)
Race-Ethnicity (0= Non-Hispanic White)				
Non-Hispanic Other Race	0.206*** (0.0518)	0.179*** (0.0522)	0.181* (0.0885)	0.168 (0.0870)
Hispanic	-0.0894* (0.0540)	-0.0999 (0.0540)	-0.170 (0.0970)	-0.181 (0.0978)
Other	0.0839 (0.0676)	0.0760 (0.0678)	0.0951 (0.118)	0.0854 (0.118)
Education (0= Less than HS)				
High School Degree or GED	-0.128* (0.0547)	-0.112* (0.0547)	-0.154 (0.0961)	-0.146 (0.0967)
Some College	-0.223*** (0.0548)	-0.189*** (0.0551)	-0.267** (0.0950)	-0.245* (0.0965)
4-Year Degree or More	-0.696*** (0.0636)	-0.627*** (0.0649)	-0.551*** (0.113)	-0.495*** (0.119)
Age	-0.0124*** (0.00207)	-0.0115*** (0.00210)	-0.00633* (0.00285)	-0.00614* (0.00295)
Children (0=no children)	-0.0921* (0.0378)	-0.0777* (0.0379)	-0.0409 (0.0624)	-0.0408 (0.0622)
Cohabiting (0=married)			0.249* (0.107)	0.246* (0.107)
Observations	1,547,889	1,547,889	85,758	85,758

Robust standard errors in parentheses; *** p<0.001, ** p<0.01, * p<0.05. Asset and income variables measured in standard deviation units. Source: Authors' estimates using SIPP data.

Appendix Table D. Cox Proportional Hazards Model Predicting Non-Linear Associations of Wealth and Debt on Risk of Union Dissolution.

	Model 1	Model 2
Secured Debt		
4 th Quartile	−0.135*** (0.0377)	−0.136*** (0.0377)
Mortgage (sd)	−0.0331 (0.0243)	−0.0196 (0.0262)
Unsecured Debt (ref=1 st quartile)		
2 nd Quartile	0.00619 (0.0542)	0.00580 (0.0542)
3 rd Quartile	0.0252 (0.0344)	0.0248 (0.0344)
4 th Quartile	0.0736* (0.0341)	0.0735* (0.0341)
Liquid Assets (ref= 1 st quartile)		
2 nd Quartile	−0.139*** (0.0358)	−0.139*** (0.0359)
3 rd Quartile	−0.371*** (0.0425)	−0.372*** (0.0425)
4 th Quartile	−0.484*** (0.0529)	−0.484*** (0.0529)
Illiquid Assets (ref= 1 st quartile)		
2 nd Quartile	−0.265*** (0.0376)	−0.265*** (0.0376)
3 rd Quartile	−0.327*** (0.0396)	−0.326*** (0.0396)
4 th Quartile	−0.340*** (0.0467)	−0.339*** (0.0467)
Home Equity (sd)	−0.238*** (0.0306)	−0.248*** (0.0319)
Mortgage Circumstance		
Underwater		−0.0949 (0.0676)
Observations	1,738,432	1,738,432

Robust standard errors in parentheses; *** p<0.001, ** p<0.01, * p<0.05; sd = standard deviation units. Controls for income, employment, education, age, children, and relationship type included in all models.

Respondents' holdings of secured debts, less the value of the mortgage, did not fall into the 2nd or 3rd quartiles, thus they are omitted. This reflects the fact that, except for mortgage debt, most people do not have much other secured debt, except for those who own businesses, who then tend hold large amounts of other secured debt.

Measured as a dummy variable indicating whether respondent owes more on mortgage than the current value of the house.

Source: Authors' estimates using SIPP data.

Appendix Table E. Cox Proportional Hazards Model Examining Associations of Joint and Sole Wealth and Debt Ownership with Risk of Romantic Relationship Dissolution

	Model 1	Model 2	Model 3
Has Secured Debt (0=does not have)	-0.390*** (0.0298)	-0.140*** (0.0342)	-0.140*** (0.0342)
Has Unsecured Debt (0=does not have)	0.0853** (0.0289)	0.0803** (0.0289)	0.0801** (0.0289)
Has Liquid Assets (0=does not have)	-0.261*** (0.0365)	-0.210*** (0.0360)	-0.210*** (0.0360)
Has Illiquid Assets (0=does not have)	-0.377*** (0.0514)	-0.328*** (0.0511)	-0.328*** (0.0511)
Joint vs. Sole Homeownership (0 = do not own)			
One Partner Owns Home		0.468*** (0.0484)	
Partners Jointly Own Home		-0.674*** (0.0384)	-0.674*** (0.0384)
Male Partner Solely Owns Home			0.425*** (0.0630)
Female Partner Solely Owns Home			0.509*** (0.0611)
Observations	1,738,432	1,738,432	1,738,432

Robust standard errors in parentheses; *** p<0.001, ** p<0.01, * p<0.05. Controls for income, employment, race, education, age, children, and relationship type Included in all models. Source: Authors' estimates using SIPP data.

Appendix Table E. Cox Proportional Hazards Models Examining Associations of Financial Insecurity with Risk of Romantic Relationship Dissolution, by Amount of Wealth and Debt

	Model 1	Model 2	Model 3
Panel A. Financial Insecurity			
Secured Debt	−0.129*** (0.0266)	−0.129*** (0.0266)	−0.128*** (0.0266)
Unsecured Debt	0.00718 (0.00503)	0.00714 (0.00504)	0.00715 (0.00504)
Liquid Assets	−0.672*** (0.178)	−0.857** (0.168)	−0.671*** (0.178)
Illiquid Assets	−0.193*** (0.0358)	−0.193*** (0.0356)	−0.210*** (0.0404)
Income (sd)	−0.00770 (0.0211)	−0.00622 (0.0208)	−0.00711 (0.0210)
Income Shock (0 = no shock)	0.138*** (0.0301)	0.163*** (0.0324)	0.149*** (0.0315)
Interactions			
Income Shock * Liquid Assets		0.583 (0.317)	
Income Shock * Illiquid Assets			0.0586 (0.0539)
Observations	1,738,432	1,738,432	1,738,432
	Model 4	Model 5	
Panel B. Financial Hardship			
Secured Debt			
4 th Quartile (ref=1 st quartile)	−0.0366 (0.0757)	−0.0464 (0.0753)	
Mortgage (sd)	−0.103 (0.0584)	−0.114* (0.0578)	
Unsecured Debt (ref=1 st quartile)			
2 nd Quartile	−0.00282 (0.118)	−0.0158 (0.117)	
3 rd Quartile	0.115 (0.0724)	0.0722 (0.0726)	
4 th Quartile	0.189** (0.0729)	0.135 (0.0732)	
Financial Hardship (0=no hardship)		0.679*** (0.0670)	
Observations	446,379	446,379	

Robust standard errors in parentheses; *** p<0.001, ** p<0.01, * p<0.05. Controls: employment, race, education, age, children, relationship type in all models. Models 4 and 5 have liquid and illiquid assets quartile variables in the models. Asset and income variables measured in standard deviation units. Source: Authors' estimates using SIPP data.

CHAPTER 5: CONCLUSION

This dissertation examines the cultural process of constructing policymaking problems and considers the consequences of particular constructions of a problem for the resulting policy responses. I analyze the construction of the housing market collapse in the U.S. in the late 2000s, identifying variations in key policymakers' understanding of mortgage borrowers and mortgage lenders, which impacted the policies they advocated during the crisis. I also analyze the construction of the foreclosure crisis within U.S. states, a context that allows for statistical analysis of the relationship between cultural meaning and policy adoption. The crisis eroded the wealth of U.S. households and the policy response, although aiding a quick recovery of assets disproportionately held by wealthier households, did little to stabilize housing assets, which is often the only asset held by middle and lower income households. This dissertation also examines the relationships between wealth, debt, family stability, and macro-economic contexts.

The theoretical contributions of the dissertation are twofold. First, this work contributes to the growing culture and policymaking literature by elaborating a framework of defining a policymaking problem, a process in which cultural meaning is essential. The locus of available cultural meanings is policymaking organizations' previous and on-going engagements. Although policymakers had to make sense of a newly emerging situation in the housing markets, they nevertheless were already engaged in various capacities with housing and mortgage borrowing and lending. While working to make sense of the problems in the housing markets, policymakers drew on the meanings embedded in those previous engagements.

This moves previous culture and policy work beyond invoking “deeply embedded cultural categories” (Steensland 2006: 1274) without identifying where they are embedded.

Locating cultural meaning at the organizational level, rather than conceiving of culture as operating at the national level (e.g. Dobbin 1994), helps account for the conflict that often characterizes policymaking. Additionally, this work suggests that the potential for both path dependency as well as change is contained in the use of foregoing organizational meanings to define an unfolding problem. While policymaking organizations creatively put organizational resources to innovative uses (rather than being strictly constrained by them), they did so to the extent that particular actions made sense given their understanding of the problem. If policymakers' understanding of the situation implies particular action, they can re-interpret the scope of their authority or a particular policy accordingly, leading to institutional changes. At the same time, since policymakers are drawing on meanings embedded in their previous engagements, it's not likely that their definitions of an unfolding problem will suggest actions far afield from those previous engagements. However, when an emerging problem results in interaction among policymakers who may draw on different embedded meanings, the negotiated definitions in such situations may imply wholly new actions.

This work also contributes to organizational theory, which has tended to focus on three theoretical pillars: interests, institutions, and organizational structures (Amenta, Bonastia, Caren 2001; Scott 2014; Skocpol 1985). In the case of the housing market collapse, it is easy to imagine interests--those of Wall Street-bound regulators or of Wall Street participants themselves--influencing the policy response. It is also easy to imagine the world-class economists running the highly structured economic policymaking bureaucracies following more or less rational policymaking procedures. However, retracing the unfolding of the crisis and considering the problem as policymakers did at various time points, shows what others have argued--interests are not always clear in uncertain situations. Similarly, the applicability of

foregoing institutional and organizational structures is unclear. Cultural meanings “refract” interests and give direction to institutional and other structural forces (Anderson 2013; Campbell 2002; Meryl and Quinn 2017: 8; Weber [1922] 1946: 280).

However, identifying the relevant aspect of culture is difficult (Kane 1997; Norton 2014.) As the crisis unfolded, policymakers initially differed in their assessments of the severity of the situation and the particular conditions and events leading to it. Policymakers who came to be in opposition on the appropriate housing market response, nevertheless, quickly sorted out the basic narrative of the subprime expansion, loose underwriting, and ubiquitous “toxic” mortgage-backed securities destabilizing financial markets. Rather than the cultural tension being over the causes of the crisis, the relevant cultural meanings that implied vastly different policy responses to the housing collapse were more fundamental: a construction of mortgage borrowers and lenders. Are mortgage borrowers rational investors who will walk away from an underwater mortgage? Or are they struggling homeowners who would and could fulfill their financial obligations with some help? In one of these constructions it makes sense to commit tax dollars to the problem while in the other it would be irresponsible. Similarly, are mortgage lenders neutral providers of financial choices or are they predatory lenders of exploitative products? If the former, government-mandated mortgage modifications would be government overreach into markets and an abrogation of contracts. These cultural understandings are the foundation of policymakers' policy responses to the housing market collapse. Without this foundation, the contention between policymakers as well as their preferred policies do not make sense.

The analyses in this dissertation advance methodological approaches that use computational methods to measure and quantify cultural concepts. I use topic modeling to coherently display themes in large bodies of text and offer these as corroborating evidence of

qualitative presentations of pieces of the same data. I also use computational procedures to quantify cultural meaning for use in event history and diffusion models. While there is still much room for improvement, these methodological advances open up many new data sources and methods for culture researchers.

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