

ABSTRACT

Title of Dissertation: **INSTITUTIONAL INVOLVEMENT AND
THE MENTAL HEALTH EFFECTS OF
PERCEIVED NEIGHBORHOOD DISORDER
IN OLD AGE: THE ROLE OF PERSONAL
AND DIVINE CONTROL.**

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Previous research has shown that perceptions of neighborhood disorder are related to increased levels of psychological distress. Neighborhood disorder may be especially salient for older adults because the transitions associated with aging heighten the salience of the neighborhood as an arena for social interaction. A stress-process perspective suggests that the effects of neighborhood disorder on mental health may be indirect, and mediated through harm in elders' self-concepts, but also that the structural arrangements in which individuals are embedded may protect elder's mental health by protecting the self. I add to this perspective by focusing on engagement in family and religious institutions as primary indications of enmeshment in the structural arrangements of society. Using a longitudinal study of older adults, I examine whether marriage prevents the mental health effects of perceived neighborhood disorder by protecting mastery, and whether attendance at

religious services and prayer protect elders' mental health by preventing loss of a second type of perceived control, sense of divine control. Results show that marriage prevents the effects of neighborhood disorder on depression and anger by preventing a loss of mastery. Further, losses in mastery strengthen the effects of neighborhood disorder on mental health, but only for women and the less educated. Neighborhood disorder is also related to loss of sense of divine control, but only for elders with greater levels of education, and religious involvement helps prevent these effects. However, this moderation provides no mental health benefits, and change in sense of divine control does not alter the relationship between neighborhood disorder and mental health. A primary contribution of this dissertation is that it places the effects of perceived neighborhood disorder in a larger structural context by demonstrating that they are contingent on engagement in the social structures which pattern human behavior and sustain the structure of society.

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OF PERCEIVED NEIGHBORHOOD DISORDER IN OLD AGE:
THE ROLE OF PERSONAL AND DIVINE CONTROL.

By

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CHAPTER 1. STATEMENT OF THE PROBLEM AND RESEARCH QUESTIONS

Research in the sociology of health has recently called attention to the importance of the neighborhood setting as a contributor to individuals' mental health status. Residents' perceptions of problems in their neighborhoods, such as noise, decrepit physical structures, unruly residents, and crime, are especially detrimental to their mental health (e.g., Aneshensel and Sucoff 1996; Christie-Mizell, Steelman, and Stewart 2003; Ross 2000; Steptoe and Feldman 2001). Perceived neighborhood disorder may be particularly important for the mental health of older adults. Elderly individuals have more discretionary time in which to interact with others (Campbell and Lee 1992), but the cessation of work and the increase in mobility limitations which tend to accompany aging are likely to heighten the neighborhood as an arena for social interaction for the elderly (Cantor 1975; Oh 2003). Consequently, neighborhood conditions can increase in salience in old age (Glass and Balfour 2003), so that even long-time residents of a neighborhood may experience effects of these conditions, and even moderate amounts of neighborhood disorder may have detrimental consequences for elders' mental health. Therefore, in this research, I examine factors which may help prevent the effects of perceived neighborhood disorder on elders' mental health, a process known as "buffering" (Wheaton 1985).

The investigation of possible buffers for the effects of perceptions of neighborhood disorder on mental health is based in the paradigm of the stress process model. This sociological model of the pathways by which stress affects

mental health calls attention to the way in which social structure both shapes exposure to stress and the ways in which stress affects mental health by reducing psychological resources (Pearlin 1999). A focus on reduction in resources is especially important for the effects of neighborhood disorder on mental health, because the self is endemic to this process, as perceptions of disorder may detrimentally affect feelings of personal control (Downey and Van Willigen 2005; Geiss and Ross 1998), and sense of control has in turn been linked with mental health (Ross and Sastry 1999).

However, in discussing the effects of stress, Pearlin (1989) notes that “this process and its components largely arise from and are influenced by various structural arrangements in which individuals are embedded” (pg. 214). Clearly, then, the effects of stress on mental health are differentiated in part by individuals’ enmeshments in various social structures, so the question becomes one of how best to study and understand varying degrees of individuals’ structural enmeshments. One potential avenue for understanding individual enmeshment in social structure is through the study of institutional involvement. Social institutions are in part social structures which organize relatively stable patterns of human activity, thereby providing structure to society (Turner 1997). Through involvement in institutions, individuals become embedded within the structural arrangements of society, thereby shaping responses to stress.

Therefore, neighborhood disorder may indirectly affect psychological distress through loss of perceived control, but these effects are likely contingent on elders’ institutional involvement. One of the most important types of institutional

involvement to consider is involvement in the family through marriage. Marriage is a primary means of engagement in the family institution (Turner 1997), and marriage may condition the effects of neighborhood disorder on individuals' mental health because marriage provides a contrasting social arena to the neighborhood, where there are "established patterns of responsibilities and commitments" (Schieman and Taylor 2001:470). These patterns likely create a sense that one's social environment is ordered, predictable, and responsive to one's needs, thus bolstering individual sense of control. *Therefore, the first question I ask in this dissertation is whether marriage buffers the effects of neighborhood disorder on mental health by preventing a loss of sense of control.*

In addition to sense of control, disordered neighborhoods may also lead to a loss of a sense of a divine power in one's life. This may occur because religion supports the socially constructed order of reality (Berger 1967), so that confrontation with disorder may challenge the individual's religious convictions. In addition, powerful stress may cause people to feel alienated from or abandoned by a higher power (Herman 1992; Wilson and Moran 1998). This may in turn undermine the sense that a divine power cares for and guides the outcomes in one's life, and this "sense of divine control" has also been linked to mental health outcomes (Schieman et al. 2006).

Involvement in a second key institution, religion, may help prevent these effects. Involvement in religion, as indicated by religious activities, may help prevent the loss of a sense of divine control by providing increased religious social support (Krause 2002) and by making more concrete the substance of religious

belief (Berger 1967). Religious involvement may also increase commitment to the religious role, which in turn makes the religious identity more salient (Stryker and Serpe 1982); religious cognitions will likely be more resistant to decreases in the face of stress if the identity associated with these cognitions is highly salient.

Therefore, the second question I address in this dissertation is whether involvement in religious activities helps buffer the effects of neighborhood disorder on mental health by preventing a loss of sense of divine control.

A stress process perspective also conceives of psychological resources as potential buffers of stress in and of themselves, and aspects of the self have been identified as stress-buffers (Pearlin 1999; Thoits 1999a). Senses of control and divine control may buffer the effects of neighborhood disorder by providing a sense that one's success is not completely dependent on a disordered, threatening environment, and that a divine power is concerned with and looking out for the individual's safety and well-being.

Research on neighborhood disorder and the self also suggests the possibility of a more complex set of effects over time. Ross, Mirowsky, and Pribesh (2001) indicated that the decreases in sense of control which resulted from perceptions of neighborhood disorder *strengthened* the effects of perceived disorder on mistrust. This was termed "structural amplification," which referred to a situation in which "conditions undermine the personal attributes that otherwise would moderate the undesirable consequences of those conditions" (Ross et al. 2001:569). Thus, the concept of structural amplification leads us to ask if the *loss* of sense of control and sense of divine control may exacerbate the effects of perceived neighborhood

disorder on mental health.¹ The concept of structural amplification does not specifically acknowledge the benefits of *increases* in psychological resources. Increases in perceived control or sense of divine control are likely to dampen the effects of perceived neighborhood disorder on elders' mental health, though, because an increasing sense of control or increasing belief that a higher power guides our lives and looks out for us is likely to decrease the stress and sense of threat which results from perceived disorder.

A focus on structural amplification once again returns us to a focus on social institutions because, if involvement in institutions prevents a loss of perceived control and sense of divine control, and loss of these resources strengthens the detrimental effects of neighborhood disorder, the effects of neighborhood disorder on elders' mental health may be especially pernicious when elders are not involved in these institutions. What essentially may occur is a "double-whammy" effect, whereby elders who are not involved in these institutions experience an increase in psychological distress due to the loss of psychological resources, *and* the loss of these resources *exacerbates* the effects of neighborhood disorder on psychological

¹ It is important to note that structural amplification is not the same as the loss of self explaining the effects of neighborhood disorder on mental health. The question of the loss of self as explanation is one of mediation, in which a stressor affects a second variable, which in turn affects mental health; structural amplification is a question of moderation, in which the loss of sense of self over time interacts with baseline levels of perceived neighborhood disorder to increase the effects of perceived neighborhood disorder on mental health (Aneshensel 2002).

distress. *Therefore, the third question I examine in this dissertation is whether the loss of perceived control and sense of divine control due to neighborhood disorder exacerbates the effects of neighborhood disorder on mental health.*

To answer these questions, I will use data from the Aging, Stress, and Health (ASH) study. The ASH study is a longitudinal study of older adults in Washington, D.C. and two adjoining counties in Maryland. The ASH study is useful for answering these questions because, in addition to containing multi-item scales of perceived neighborhood disorder, the self, and mental health, the data were designed to be diverse in the social characteristics of the respondents. Therefore, in addition to examining the relations between neighborhood disorder, institutional involvement, the self, and mental health, I can also examine how these relations may vary by social status. Further, since these data are longitudinal, this dissertation will focus on the effects of neighborhood disorder on *change* in the self and mental health. This will be especially important in answering questions regarding the buffering effects of institutional involvement, because it will allow an examination of whether moderation of the effects of neighborhood disorder on mental health are due to initial levels of the self associated with marital status and levels of religious activity, or whether the moderation is specifically due to prevention of the degradation of the self.

A conceptual model of these relationships is presented in Figure 1.² Within this model, solid lines indicate influences of one variable on another, while broken lines indicate that a variable moderates the relationship between two other variables. In general, the model shows how neighborhood disorder harms mental health, with both institutional involvement and the self-concept included in the model as key components of the process. The circle around this model indicates that race, class, and gender moderate different aspects of these relationships, and the particular moderating functions will be discussed further in the literature review. Moreover, this model describes the following specific relationships:

- The solid lines which lead from neighborhood disorder to mastery, and from mastery to mental health, indicate that neighborhood disorder affects mental health by decreasing mastery.
- The broken line from marriage to the path between neighborhood disorder and mastery indicates that involvement in the family through marriage lessens the effects of neighborhood disorder on mastery, thereby buffering the effects of neighborhood disorder on mental health.
- The paths between perceived neighborhood disorder and sense of divine control, and between sense of divine control and mental health, indicate that neighborhood disorder affects elders' mental health by decreasing sense of divine control.
- The broken line from religious activity to the path between neighborhood disorder and sense of divine control indicates that involvement in religion through religious activities lessens the effects of neighborhood disorder on sense of divine control, thereby buffering the effects of neighborhood disorder on elders' mental health.
- The broken lines from mastery and sense of divine control to the path between perceived neighborhood disorder and mental health indicates that

² It should also be noted that this model will be tested through a series of analyses, so that no one quantitative model will necessarily test this entire model. In fact, as will be seen below, the test of this conceptual model will require three interrelated sets of analyses.

change in these psychological resources will moderate the relationship between perceived disorder and mental health.

In summary, research on neighborhood disorder has shown that perceived neighborhood disorder is related to increased levels of psychological distress. However, this dissertation identifies a crucial gap in the literature on the mental health effects of neighborhoods because little research has examined whether these effects vary by levels of institutional involvement. A focus on institutions is called for by a sociological perspective on mental health, which suggests that the effects of stress on mental health may not be the same for all individuals, and may vary by the structural arrangements in which individuals are embedded. By examining how institutional involvement may buffer the effects of neighborhood disorder on elders' health, the current research places these neighborhood effects in a larger structural context by focusing on the social structures which pattern basic human behavior and sustain the structure of society. Furthermore, by showing that institutional involvement may prevent structural amplification by protecting the self, this dissertation also places previous research on structural amplification in a broader sociological context. Finally, by showing how the buffering effects of institutional involvement in turn vary by essential aspects of elders' social status—such as race, gender, and SES—this dissertation demonstrates how social stratification is a vital organizing force for the role that social institutions play in individuals' lives. Therefore, in linking social status, social institutions, and the self to the study of neighborhoods and elders' health, this dissertation presents a quintessentially sociological perspective regarding the social psychology of the effects of perceived neighborhood disorder on mental health.

Overview of Chapter 2: Literature Review

In the following chapter, I review the research literature pertaining to the three research questions addressed in this study. This review takes place in several parts. First, I describe the paradigmatic perspective in the sociological study of stress and mental health, the stress process model (Pearlin 1999). This account includes a description of how stress may affect mental health by reducing psychological resources, as well as a discussion of the way the stress process perspective's attention to individual enmeshment within the structural arrangements of society guides us to explore whether institutional involvement protects mental health by protecting the self. I also describe how this perspective guides us to focus on social status as endemic within each aspect of the stress process, so that we also ask how the protective effects of institutional involvement vary by "master" social status variables, such as race, class, and gender. In addition, I describe a related concept of "structural amplification," in which the loss of psychological resources due to stress may *strengthen* the effect of stress on mental health. However, I integrate this concept into the stress process model by introducing a focus on variations in structural amplification by social status, while at the same time connect this concept to the role of institutional involvement by focusing on the loss of psychological resources which may be protected by institutional involvement.

Following this discussion, I describe previous research on the mental health effects of neighborhood disorder, focusing on how neighborhood disorder may lead to increased psychological distress by affecting the self. I also describe how institutional involvement may prevent these losses, thereby lessening both the

indirect effects of neighborhood disorder on mental health, as well as structural amplification. I focus on two of the institutions most likely to be important for older adults—family and religion—using marriage as the focal means of involvement in the family and religious activities as the main path to involvement in the religious institution. I suggest that two components of the self may be affected by neighborhood disorder, mastery and sense of divine control, and that marriage may protect mastery, while involvement in religious activities may prevent losses in sense of divine control.³ Within this discussion, a concomitant focus is on the way

³ I focus on family and religion in this dissertation because they are two of the most important social institutions for structuring society (Turner 1997), and also because they may be critically important to older adults as these individuals face disengagement from other institutions with increasing age, such as the termination of their careers (Duncan 2003). Furthermore, empirical evidence reviewed below indicates that involvement in these specific institutions is related to the dimensions of the self-concept examined in this research. However, I do not examine whether marriage prevents effects of neighborhood disorder on sense of divine control, nor do I examine whether religious involvement prevents the effects of perceived neighborhood disorder on mastery, because these additional effects are far less likely, and, most importantly, there is no strong theoretical justification to support such effects. This dissertation therefore focuses on the aspect of the self most likely to explain how each type of institutional involvement buffers the effects of perceived neighborhood disorder on mental health. In addition, as indicated in

in which these processes may vary by specific status variables, with the preventative effects of marriage varying by gender and the preventative effects of religious involvement varying by race and SES. In addition, I describe how losses of both components of the self may amplify the effects of neighborhood disorder, with these losses likely to have greater amplifying effects for elders lower in social structural power: women, racial minorities, and elders at lower levels of SES.

footnotes in the results section, these additional moderating effects were tested in ancillary analyses, and none were significant.

CHAPTER 2. LITERATURE REVIEW

A Sociological Perspective on the Role of Institutional Involvement and the Self in Stress and Mental Health

A sociological perspective on health and illness takes the view that illness may not simply be due to biological agents, but is instead a normal response to abnormal environmental demands (Kessler et al. 1995). Consequently, poor psychological health may be a response to a stressful or disordered social environment. However, a stress process perspective suggests that stressors will not have unitary effects on mental health. Rather, this perspective suggests that effects of stressors will vary, depending on an individual's access to psychological and social resources, and that access to these resources will be based in part on an individual's social status (Pearlin 1999). From this perspective, socially patterned contingencies are crucial to understanding how stress affects mental health.

Part of understanding these socially patterned contingencies rests with examining individuals' placement within social structure. A stress process perspective locates social structure as a critical contingency for the effects of stress, as "this process and its components largely arise from and are influenced by various structural arrangements in which individuals are embedded" (Pearlin 1989:214). Hence, in addition to ascribed and achieved status characteristics, a comprehensive sociological understanding of how any particular stressor affects mental health must also include a focus on the ways that individuals' involvement in the structures of society may condition the effects of stress on health.

Institutional involvement is likely to be a powerful method for examining individual enmeshment within structural arrangements. This is because, as Turner (1997) has argued from an evolutionary perspective, large-scale, enduring social institutions provide the structure of society. These types of institutions provide the structure of society because they are, “inclusive systems that embrace other kinds of structures and, in so doing, provide a broad framework for patterning distinctive classes of human behavior” (Turner 1997:6). Through their coexistence, institutions provide the broad framework in which more immediate aspects of society function, while at the same time patterning human behavior. By providing a broad framework which patterns human behaviors, social institutions provide the central structure of society. This is clear in Turner’s definition of institution, which reflects his view of institutions as the broad units which structure the framework for social functioning. Turner (1997:6) states that an institution is

a complex of positions, roles, norms, and values lodged in particular types of social structures and organizing relatively stable patterns of human activity with respect to fundamental problems in producing life-sustaining resources, in reproducing individuals, and in sustaining viable societal structures within a given environment.”

The institution is therefore not only a complex of positions, roles, norms and values, but is also the social structure which is particular to and contains this complex. Engagement within these institutions is a primary way of embedding one’s self within the primary structuring units of society, and the study of the degree to which individuals are involved in these institutions facilitates the study of variations in individual embeddings within social structure.

It is important to note that the utility of this definition derives in part from its exclusivity. Identifying a specific set of structures which form the basic structure of society, and explicitly outlining the sub-components of each of these structures, facilitates discernment of the co-existence and influence of these structures. The alternative, a less precise or more expansive perspective regarding institutions, would be counter productive as it would obscure the degree to which these structures interact or structure smaller units of society. Thus, that institutions “are inclusive and cut across diverse types of structures, ranging from groups and organizations to communities, social classes, and social categories” limits what can be considered an institution to only the most broad and encompassing of social structures, for which the influence and relevance of these structures is active across other structuring units of society (Turner 1997:5-6). This definition therefore does not rule out the existence of other types of social structures within society, and in fact specifically acknowledges them, but considers them subordinate in the sense that their comprehensiveness and inclusivity is not as extensive as institutions, and, most importantly, such smaller units do not actively co-exist to provide an overarching framework for society. For instance, few would doubt the importance of the neighborhood to many individuals, but the neighborhood is an aspect of community and itself does not cut across diverse types of structures, nor is the influence of the neighborhood felt across nearly all social environments. There are, for instance, many areas in the United States alone, such as rural farming areas, where there is little in the way of a “neighborhood,” but at the same time the

presence and influence of such institutions as the family and religion are overwhelmingly apparent.

With this orientation regarding institutions in mind, as we note the need from a stress process perspective to study how individuals are embedded within structural arrangements, we can see that by studying the degree to which individuals are involved in institutions, we can examine the degree to which individuals are embedded within structural arrangements. In addition, two of the primary institutions Turner (1997) identifies as providing structure to society are religion and family. For the elderly, involvement in these two institutions may be especially important. As individuals age, avenues of involvement in other institutions such as one's professional career may end (Duncan 2003), so that the family and religion may become two of the few remaining institutions in which older individuals are engaged.⁴ For the elderly, involvement in two specific institutions, family and religion, may be especially important. As individuals age, avenues of involvement in other institutions such as one's professional career may end (Duncan 2003), so

⁴ In addition, while there may be multiple aspects of involvement within the family, such as child rearing, by old age child-rearing is most likely largely finished. While the bond with the adult child may still affect the elderly parent (e.g., Milkie, Bierman and Schieman 2006), this is likely to be secondary to the day-to-day engagement provided by marriage, while the diminishment of the parenting role may also increase the salience of the marital connection. It is for this reason that this dissertation focuses on marriage as the primary means of involvement within the family institution.

that the family and religion may become two of the few remaining institutions in which older individuals are engaged.⁵ Therefore, a central contribution of this dissertation is in showing how a focus on institutional involvement can help address the stated need within the stress process perspective to carefully consider the role of individuals' structural embeddedness in the stress process.

Further, involvement in these institutions can occur through engagement in the norms and practices associated with the institution. For instance, the family is the social structure which, in part, encapsulates specific roles, positions, norms and values, of which marriage, as a norm, is one element (Turner 1997:74-75).⁶

⁵ In addition, there may be multiple aspects of involvement within the family, such as child rearing, but by old age child-rearing is most likely largely finished. While the bond with the adult child may still affect the elderly parent (e.g., Milkie, Bierman and Schieman 2006), this is likely to be secondary to the day-to-day engagement provided by marriage, and the diminishment of the parenting role may also increase the salience of the marital connection. It is for this reason that this dissertation focuses on marriage as the primary means of involvement within the family institution.

⁶ For family, rather than specifically discussing "the family," Turner (1997) discusses the "kinship system," which he defines as,

those normative systems, infused with values, that specify the size and composition, residence patterns, activities, authority relations, and lines of descent within those units organizing blood and marriage ties in ways that have consequences for regularizing sex and mating, socializing the young, providing biological and social support, placing the young into broader social structure and, at times, coordinating other institutional activities (Turner 1997:75).

Participating in the norm of marriage is therefore one way of involvement in the larger family institution which encompasses this norm. Similarly, participation in the rituals subsumed in the institution of religion is one means of involvement in this institution (Turner 1992:102), so that engagement in attendance at religious services or prayer is one means of involvement in the religious institution.

The questions remains, though, of how individual embeddedness within structural arrangements may lead to variations in the relationship between stress and mental health. To answer this second question, we turn to a second aspect of the stress process model, in that this model suggests that stress may not directly affect mental health. Instead, these effects may be indirect, as new stressors are created and valuable resources are lost (Pearlin 1999). Important among the resources that may be lost as a result of stress is one's positive sense of self (Thoits 1999a). Loss of the self may create increased psychological distress, so that by degrading one's sense of self, stress may increase the level of psychological distress individuals experience.

Stress may affect the self because, from a sociological perspective, one's self-concept is in part a product of social forces (Rosenberg 1981). More

This is clearly an exhaustive definition of what most sociologists and many non-sociologists alike would consider the family system in an extended institutional sense. Therefore, this dissertation will refer to the kinship system with the more conventional moniker of "the family," with the understanding that this is the definition being applied.

specifically, the self is the degree to which an individual views himself or herself as an object, so that the self refers to “*the totality of the individual’s thoughts and feelings having reference to himself as object*” (Rosenberg 1986:7; emphasis in original). From a sociological perspective, the key to the self is “human reflexivity, or the ability to view oneself as an object capable of being not just apprehended, but also labeled, categorized evaluated, and manipulated” (Owens 2003:207). The primary genesis of the self is an individual’s appraisals of himself or herself as an object within the environment, and a primary fulcrum for these self-reflections is one’s social experience and interactions (Rosenberg 1981), so that the self is born of the social. Further, one aspect of these social experiences which may have a major influence on self-reflections is stress, as “the presence of noxious circumstances... apparently functions to strip away the insulation that otherwise protects the self against threats to it” (Pearlin et al. 1981:340). Hence, as various strains impact the individual, this may cause the individual to reflexively evaluate himself or herself in a more negative fashion, thereby degrading the self.

However, an individual’s social placement may provide a bulwark against the degradation of the self by noxious social conditions. This is because “resources are not immutable but can be diminished (or replenished) by the social and economic statuses surrounding the stress process” (Pearlin 1999:406). Hence, from this perspective, one way that individual placement within social structure conditions the effects of stress on mental health is by countering the losses of the self due to stress, thereby dampening the degree to which stressors may indirectly affect mental health. Studying how involvement in particular social intuitions may

prevent the loss of the self due to stress is therefore likely to be critical for understanding how social structure shapes the effects of stress on mental health and stratifies the social distribution of mental health.

A stress process perspective also calls attention to the role of basic statuses of “power, privilege, and prestige” as regulating the association between institutional involvement and psychological resources because, “People’s standing in the stratified orders of social and economic class, gender, race, and ethnicity have the potential to pervade the structure of their daily existence and the experiences that flow from it” (Pearlin 1999:397-398). Therefore, to integrate a focus on institutional involvement within the stress process perspective, we must also focus on the way that protection of the self through institutional involvement may vary by master social statuses. Consequently, as this dissertation examines the way in which the effects of neighborhood disorder on the self may vary by levels of involvement in the family and religion, a concomitant focus will be placed on whether this moderation in turn varies by master social statuses.

The loss of self due to stress may have additional effects on mental health beyond simply leading to increased psychological distress. The reason for this second consequence ties into the idea that, beyond the depletion of psychological resources as an explanation for the indirect effects of stress, a stress process perspective also suggests that psychological resources may help moderate or “buffer” the effects of stress on mental health (Pearlin 1999). Typically, a resource is a “buffer” when it lessens the impact of the stressor on mental health, usually conceived of as an interaction between the stressor and resource (Wheaton 1985).

By the same token, however, the *loss* of this resource may *amplify* the effects of the stressor on mental health. This suggests that a stressor may be especially damaging when the stressor not only affects mental health, but also strips the individual of the resource which may counteract the effects of the stressor. Specifically, this is referred to as “structural amplification,” in which, “a mediator of an association between an objective condition and a subjective belief (or feeling) also amplifies that association” (Ross et al. 2001:573). On a more general level, structural amplification can be seen as a situation in which “conditions undermine the personal attributes that otherwise would modify their undesirable consequences” (Mirowsky and Ross 2003:240). In the context of the stress process model, the concept of structural amplification suggests simultaneous mediating and interactive effects, so that the loss of psychological resources not only provides a mechanism for the effects of the stressor on mental health, but also exacerbates the effects of stress. In short: “The mediator of an undesirable effect is also a magnifier of that effect” (Mirowsky and Ross 2003:240).

Therefore, by preventing a loss of self due to stress, institutional involvement may simultaneously provide two mental health benefits. First, institutional involvement may prevent the increase in psychological distress which is created by a loss of psychological resources, and, second, by preventing the *amplification* of the effect of stress on mental health which the loss of the self may create. However, since we are integrating the concept of structural amplification into the stress process model, we also ask how the process of amplification may vary by mastery status characteristics. While this will be described in more detailed

below, amplification may vary by social status in part because the distribution of psychological resources often varies by social status, so that the loss of these resources may leave some individuals feeling more vulnerable to stress than others.

However, a perspective of the stress process which synthesizes concepts of structural amplification and institutional involvement leads to the question of how neighborhood disorder may specifically affect mental health, and the degree to which the self may be involved in these effects. This perspective also leads to the question of how institutional involvement may prevent these effects, and how the prevention of loss of self by institutional involvement, as well as structural amplification, may vary by race, class, and gender. Below, I answer these questions by applying this synthetic perspective to the relationship between perceived neighborhood disorder and mental health.

Loss of Mastery as a Mechanism for the Mental Health Effects of Neighborhood Disorder: Marriage as a Buffer

Much research has shown that objective measures of neighborhood and community socioeconomic deprivation or disadvantage are related to individual-level physical and mental health outcomes (e.g., Matheson et al. 2006; Silver, Mulvey, and Swanson 2002; Wheaton and Clarke 2003; Wight, Botticello, and Aneshensel 2006). Furthermore, researchers have also examined perceptions of social and physical disorder within the neighborhood, such as such as noise, decrepit physical structures, unruly residents, and crime (e.g., Ewart and Suchday 2002; Hill, Ross, and Angel 2005; Schieman and Meersman 2004), and research has not only

shown that these perceptions are related to increased levels of mental health problems (e.g., Aneshensel and Sucoff 1996; Christie-Mizell et al. 2003; Schieman and Meersman 2004; Steptoe and Feldman 2001), but also that the effects of objective neighborhood disadvantage on mental health are mediated through perceptions of neighborhood conditions (Drukker and van Os 2003; Ross 2000).⁷ Therefore, it appears that disadvantaged communities often lead to increased levels of psychological distress in part because these neighborhoods often have greater levels of physical and social disorder.

However, from a stress process perspective, the effects of stress on mental health may be indirect, through loss of psychological resources, especially the self, and neighborhood conditions may be especially important for one central aspect of the self, one's perception of control, or *mastery*. Mastery "concerns the extent to which one regard's one's life chances as being under one's control in contrast to being fatalistically ruled" (Pearlin and Schooler 1978:5). While there is obviously a

⁷ This may also lead to the question of whether the association between perceived disorder and mental health may be because individuals with greater levels of distress are more likely to report greater levels of social and physical disorder, but it should be noted that research also indicates moderate to high correlations between respondent and observer ratings of neighborhood disorder (Andresen et al. 2006; Perkins and Taylor 1996), as well as between perceptions of neighborhood disorder and objective measures of neighborhood disadvantage (Ewart and Suchday 2002), indicating that respondents are often valid sources of information on neighborhood problems.

great similarity between different measures of personal control, mastery is differentiated somewhat by a “focus on the control of conditions that individuals regard as importantly affecting their own personal lives, not on all personal conditions” (Pearlin and Pioli 2002:5).⁸ Hence, in examining conditions that affect them and the extent to which their life chances are under their own control, individuals reflexively take themselves as object in regard to their experiences and social circumstances. Since the self-concept was described above as involving the individual taking himself or herself as object, and mastery is a product of an

⁸ Studying the different ways in which people perceive their control over lives has a long history in social psychology (for a review, see Pearlin and Pioli 2002). Some of the more influential concepts have included Rotter’s (1966) locus of control—which examines the extent to which individuals believe that they can influence events and circumstances and are therefore considered “internal” in orientation, or believe that uncontrollable forces influence these outcomes, and are therefore “external” in orientation (Benassi, Sweeney, and Dufour 1988; Pearlin and Pioli 2002). A similar concept introduced a short time later is “self-efficacy”—which is based on “the conviction that one can successfully execute the behavior required to produce the outcomes” (Bandura 1977:193). Within studies of the stress process, however, the primary concept which has been used to examine individuals’ perceived control is mastery (Pearlin and Pioli 2002:5), and it is for this reason that this measure of perceived control will be used in this dissertation. Since its introduction, the development of this concept and its measurement have remained largely unchanged.

individual reflexively taking himself or herself as object, mastery is clearly a component of the self. Moreover, since the self is in part a product of social context (Rosenberg 1981), and mastery is a component of the self, mastery may be highly sensitive to neighborhood conditions.

Problematic social and physical neighborhood conditions may in fact be an extremely inhospitable environment for individuals' mastery. Perceptions of control are based on individuals' beliefs that they are effective agents in their lives by being able to master, control, and alter the environment (Mirowsky and Ross 2003:174). By definition, people who see their neighborhoods as disordered perceive their environment as chaotic and unpredictable, and perceptions of randomness in one's environment can decrease the sense that the environment can be controlled (Abeles 2003). Repeated contact with the undesirable conditions associated with disordered neighborhoods may also lead individuals to believe that they can not control important outcomes in their lives (Geis and Ross 1998). Furthermore, the social and physical disorder which compromise neighborhood disorder can increase a sense of threat, leading to greater fear of victimization and less trust in one's neighbors (Kanan and Pruitt 2002; Robinson et al. 2003; Ross et al. 2001), and the distrust and fear which permeates this environment can add to an individual's sense that he or she can not control the occurrence of positive outcomes, further debilitating one's sense of control (e.g., Adams and Serpe 2000).⁹ The relationship between

⁹ Moreover, that the effects on trust occur largely independent of actual experiences of victimization (Ross, Mirowsky, and Pribesh 2002) and negative events more generally (Robinson et al. 2003) demonstrates that these effects are predicated on an

perceptions of neighborhood disorder and sense of control has been demonstrated in research showing that perceptions of neighborhood disorder are positively related to perceptions of powerlessness (Downey and van Willigen 2005; Geis and Ross 1998). Additionally, objective aspects of neighborhood conditions, in terms of low neighborhood SES, have been shown to be negatively related to self-efficacy (Boardman and Robert 2000), and, given that the effects of objective neighborhood conditions have been shown to be mediated through subjective perceptions (Drukker and van Os 2003; Ross 2000; Ross and Mirowsky 2001), this provides further support for the hypothesized relationship between perceived neighborhood disorder and mastery.

A stress process perspective also suggests that the loss of self may negatively impact mental health (Pearlin 1999), and a large literature shows that there is often a quite potent relationship between mastery and psychological distress (e.g., Cotten 1999; Jang et al. 2002; Mitchell and LaGory 2002; Pearlin et al. 1981). Further, sense of control is often an important topic in the sociological study of mental health (Pearlin 1999; Ross and Sastry 1999), in part because sense of control is an important link between objective conditions and individual well-being, as social conditions shape perceptions of lack of control, which then affect psychological well-being (Ross and Mirowsky 2003). Sense of control is likely associated with mental health in part because the impression that success is merely random and people have little influence on their own lives can be quite distressing

ambient sense of disordered environment, rather than actual negative experiences which may be more likely to occur in disordered environments.

(Ross and Mirowsky 2003). However, according to control theory, a low sense of control can also exacerbate psychological distress because people will be unmotivated to find solutions to the problems they face (Mirowsky and Ross 1990).¹⁰

Neighborhood disorder may therefore decrease elders' sense of control, which in turn not only creates greater distress, but also decreases the motivation to

¹⁰ It should also be noted that this reasoning suggests that, from the perspective of the coping literature, higher levels of mastery may lead to more attempts to address and solve problems, indicating that higher levels of mastery may facilitate "problem-focused" coping strategies, in which "efforts are directed at changing or eliminating the stressful demands themselves (Thoits 1999b:127; see also Lazarus and Folkman 1984). Alternatively, individuals may also employ "emotion-focused" coping strategies, which "are attempts to alter one's emotional reactions to stressful demands (Thoits 1999b:127; see also Lazarus and Folkman 1984). Similarly, Billings and Moos (1981:141) differentiate between "active-behavioral coping," which "refers to overt behavioral attempts to deal with the problem and its effects," and active-cognitive coping, which is essentially emotion-focused coping, as well as avoidance, in which the individual may attempt to avoid confronting the problem altogether (Billings and Moos 1981). Clearly, within this coping framework, mastery would be linked to active-behavioral coping. This does not necessarily mean that mastery is synonymous with problem-focused strategies or active-cognitive coping, but instead that a high level of mastery likely facilitates these strategies or methods when faced with problems.

address various life problems, thereby further increasing psychological distress. However, as described above, individual placement within social structure may counter the losses of the self due to stress. Furthermore, that institutional involvement may be a strong indicator of individual enmeshment within social structure leads us to examine how involvement in institutions may help elders avoid the effects of perceived neighborhood on mastery, thereby facilitating the prevention of the effects of neighborhood disorder on mental health.

Marriage may be a form of institutional involvement which helps individuals retain a sense of control when faced with neighborhood disorder. Ross (1991:832) points out that the greater economic advantages which accompany marriage may increase a sense of control and the social support provided by the married partner may give individuals “the confidence, security, and self-assurance that help them feel in control of their lives and able to cope with problems.” Additionally, within marriages there are “established patterns of responsibilities and commitments” (Schieman and Taylor 2001:470). Marriage therefore likely provides a contrasting social arena to neighborhood disorder, which not only boosts one’s confidence in his or her mastery, but contains established patterns which create a sense that one’s social environment is ordered, predictable, and responsive to one’s needs, thus further bolstering individual sense of control.¹¹

¹¹ One additional possibility may also be that, within disordered neighborhoods, being married creates greater levels of fear because the individual is concerned not only for himself or herself, but also for a spouse, known as “altruistic fear” (Warr and Ellison 2000). While this is certainly possible, research suggests that it may be

Evidence regarding marital status and sense of control is mixed. In bivariate analyses of a representative sample from Toronto, Turner and Lloyd (1999) did not find significant differences between the married and the never-married or the previously married. However, using data from separate nationally representative surveys of adults across a wide range of ages, Bierman, Fazio, and Milkie (2006) and Cotten (1999) did find advantages for the married in sense of control. Furthermore, longitudinal research by Marks and Lambert (1998) found that, over time, remaining unmarried or transitioning out of marriage was negatively associated with changes in sense of control. Involvement in the family institution through marriage may therefore provide a social context in which individuals retain a sense of mastery, even in the face of neighborhood disorder.

less likely among this sample, because altruistic fear tends to decrease with age (Warr 1992), and altruistic fear specifically for one's spouse also tends to decrease with age (Warr and Ellison 2000). Further, while the link between neighborhood disorder and *personal* fear has been examined, the link between neighborhood disorder and *altruistic* fear remains to be examined, so that it remains an open question as to whether neighborhood disorder will have similar effects on altruistic fear. However, if the expected moderating effects of marriage are not found within this dissertation, I will return to the question of altruistic fear. In addition, even if altruistic fear dampens the moderating effects of marriage, the extent to which these moderating effects are found speaks to the strength of such effects. It may therefore be of interest in the future to examine whether the moderating effects of marriage would be even greater if not for altruistic fear.

Therefore, even if the larger social context may seem disordered, involvement in the family institution through marriage may provide a more proximal social environment which does not seem random and can be managed. Marriage may therefore prevent a loss of mastery due to neighborhood disorder, thereby preventing the effects of neighborhood disorder on mental health. Furthermore, little research has examined whether marriage prevents the effects of neighborhood disorder on mental health.¹² Ross and Jang (2000) touched on a related topic when they demonstrated that social connections with neighbors prevented the effects of perceived neighborhood disorder on fear and mistrust, which in turn likely prevents effects on mental health.¹³ However, while

¹² Latkin and Curry (2003) did examine whether “having a main partner” buffered the effects of change in depression and found little evidence for a buffering effect, but the generalizability of this study to the current research is questionable. Latkin and Curry (2003) specifically examined a younger, highly impoverished group, most of whom were currently or had been drug users, and, perhaps most important, only a small number were actually married. This is therefore a qualitatively different group than the older adults being examined in this dissertation, especially since it was difficult to determine if individuals even lived together with their main partner, and neighborhood co-residence would seem to be critical for buffering the effects of perceived neighborhood disorder.

¹³ It should also be noted that Schieman and Meersman (2004) showed that received social support buffered the effects of perceived neighborhood disorder on some aspects of mental health, but this study is less relevant because it does not indicate

suggestive, these results are less applicable to an older sample because among the elderly there may be a weakening of social networks as a result of life-cycle changes (Dykstra, van Tilburg, and Gierveld 2005; Oh 2003), and this is reflected in research showing that aging is often accompanied by a decrease in the size of one's social network and frequency of interaction within one's social network (Ajrouch, Antonucci, and Janevic 2001; Due et al. 1999; Morgan 1988). Hence, even if alternative social connections may be useful within the general population, these resources may decline in old age, so that involvement in the family through marriage may not only remain as a means of enmeshment in social structure, but may increase in importance. *Therefore, the first question I ask in this dissertation is whether marriage helps buffer the effects of neighborhood disorder on mental health by preventing a loss of mastery.*

The Question of Gender

It is also possible that the buffering effects of marriage may vary by an individual's gender and the outcome being experienced. In part, this question is based on gendered reactions to stress, as research has consistently found that men tend to react to stress with externalizing symptoms of mental distress, such as substance abuse or violence, while women react with internalizing symptoms of distress, such as depression or anxiety (Aneshensel, Rutter, and Lachenbruch 1991; Cleary 1987; Hankin 1990). This pattern of findings has been extended to research

the conduit through which this social support was received, institutional or otherwise.

on marriage and mental health, where it has been shown that the benefits of marriage are seen in externalizing symptoms for men and internalizing symptoms for women (Simon 2002). Therefore, within this research, it is critical to examine whether marriage is more likely to buffer the effects of neighborhood disorder on mental health for men when externalizing symptoms are considered and for women when internalizing symptoms are considered.

In terms of gender differences in the relationship between marriage and mastery, Ross (1991:832) has noted that marriages are often based on unequal distributions of power, with men in the dominant position and, if this is the case, marriage “may increase husbands’ sense of control at the expense of wives’.” Further, when controlling for a number of socioeconomic and family characteristics, Ross (1991) found that non-married women tended to have greater levels of sense of control than married women, but these differences were much less consistent for men. It therefore appeared that marriage may not be an asset for the mastery of women, and may actually be a detriment. It is also intriguing to note that this study suggests that marriage may not lead to clear advantages in mastery between married and non-married men, although it should also be remembered that this study did not specifically contrast married women to married and non-married men, leaving an important question regarding gender differences in the benefits of marriage for mastery unaddressed. However, Cassidy and Davies (2003) specifically examined married couples and found that, among married parents, men tended to have greater levels of mastery than married women, with differences in personal earnings explaining this relationship. Therefore, while the evidence is mixed, there are at

least indications that marriage may differ between men and women in the degree that it is an asset for mastery. Hence, it is important to examine whether marriage buffers the effects of neighborhood disorder on mental health differently for men and women in part because marriage tends to be less likely to prevent the negative effects of perceived neighborhood disorder on mastery for women than men.

Loss of Sense of Divine Control as a Mechanism for the Mental Health Effects of Neighborhood Disorder: Religious Activities as Buffers

Mastery may not be the only type of perceived control neighborhood disorder is likely to affect. Thus, if neighborhood disorder degrades additional control-related components of self which are beneficial to mental health, there are likely to be additional indirect pathways by which neighborhood disorder affects mental health, but these effects may also be muted through involvement in additional institutions. Furthermore, the importance of religion in old age as a remaining institution in which older individuals may be heavily involved leads us to focus on religious aspects of the self which neighborhood disorder may be both likely to affect and be tied to psychological well-being.

Religion may be especially important in the context of neighborhood disorder because one of the main functions of religion is to offer a conceptual framework for understanding the world, thereby providing people with a sense of meaning (Berger 1967; Spilka et al. 2003). Essentially, a social constructionist perspective argues that humans emerge into the world fundamentally unfinished, so that substantial parts of social order are socially derived, and religion is a primary

force for maintaining, or “legitimizing,” the order and structure of humans’ understanding of the social world. As Berger (1967:35-36) explains:

All legitimation serves to maintain reality—reality, that is, as defined in a particular human collectivity. Religious legitimation purports to relate the humanly defined reality to ultimate, universal and sacred reality. The inherently transitory and precarious transitory constructions of human activity are thus given the semblance of ultimate security and permanence. Put differently, the humanly constructed *nomoi* are given a cosmic status.

Religion can provide a foundation which bolsters the human construction of reality by linking this construction to the ultimate and the sacred. By extension, if the humanly constructed order breaks down into disorder, or becomes “anomic,” such as may be experienced when immersed within disordered neighborhoods, this may call into question the religious framework which supports the reality. While little research has directly examined the relationship between religious cognitions and neighborhood conditions, research has examined the way other types of stressors may be related to religious cognitions, and studies have shown that problematic family environments and adverse life events are related to religious doubting (Hunsberger, Pratt, and Prancer 2002; Kooistra and Pargament 1999).

Furthermore, central to the beliefs that may be challenged is that of the role of a divine power in one’s life, because powerful stress may cause people to feel alienated from or abandoned by a higher power (Herman 1992; Wilson and Moran 1998), and, by challenging beliefs that a divine power is involved in one’s life, neighborhood disorder may therefore challenge one’s conviction that a higher power is guiding one’s life and life course outcomes, which has been termed *sense of divine control*. Schieman, Pudrovskaya, and Milkie (2005:167) define the sense of

divine control as, “as the extent to which an individual perceives that God controls the direction and outcomes of daily life and, more broadly, life course trajectories.” Hence, with sense of divine control individuals are also asked to examine conditions which affect them and how these conditions affect their life chances, but in this case the conditions are supernatural rather than mortal. In other words, individuals take themselves as objects with regard to the extent to which divine forces affect their life chances. Since people take themselves as objects with regards to the forces that affect them, sense of divine control can be seen as an additional aspect of the self.

Both mastery and sense of divine control are similar, then, in that people are asked to assign responsibility to the forces that affect their life chances. The main difference being that mastery refers to being fatalistically ruled (Pearlin and Pioli 2002), while sense of divine control specifies a specific influence which is external to the individual. It should be noted, though, that a definition of the self-concept as taking one’s self as object means that an individual does not necessarily have to identify control as residing within himself or herself for these perceptions to be a component of the self. If one takes one’s self as object, but then assigns control of one’s self to sources external to the individual, this is still a part of the self. Thus, even if an individual has a low level of mastery and/or a high level of sense of divine control, from a sociological perspective both of these are still dimensions of the self.

While they are both dimensions of the self-concept, mastery and sense of divine control do differ in one important respect, in that, while mastery addresses perceptions of being fatalistically ruled, it does not necessarily take into account a

middle ground where the individual collaborates with these external forces. Conversely, sense of divine control is a relatively active view of the relationship between the individual and God. This is reflected in the items which measure sense of divine control as they ask both, “When good or bad things happen, you see it as a part of God’s plan for you,” and “You depend on God for help and guidance,” as well as the item (which is reserve-coded in empirical studies) which asks, “You decide what to do without relying on God.” Hence, within this set of cognitions, an individual with a strong sense of divine control is not necessarily passive and decides very little, but is instead active *with* and makes decisions *through* reliance on a higher power who cares for the individual personally and has a plan for the individual. Sense of divine control therefore does not simply examine the extent to which people believe that a higher power controls the world, but specifically involves the idea that God is concerned with the respondent’s own life, and is a source of support, guidance, and reliance as the individual is active in his or her own life. Consequently, far more than mastery, sense of divine control allows the individual to see himself as ruled over by external forces, but at the same time agentically in cooperation with these forces. It is largely this conception of the self as in cooperation with external forces, together with an identification of a specific external agent, which differentiates sense of divine control from mastery.¹⁴ In

¹⁴ It should be noted that sense of divine control is not the only way that perceived control by a higher power has been conceptualized. Pargament et al. (1988) provide a relatively straightforward framework for understanding these different conceptualizations. While Pargament et al. (1988) originally conceived of this

framework as useful for religious understanding different styles of problem-solving, it deals with the relationship between the individual and God, and therefore can be generalized to classifying different conceptualizations of control by a higher power. This framework conceives of control by a higher as a continuum, on which one end is “deferring,” in which the individual completely defers to the higher power, and the opposite end is “self-direction,” which the individual denies any responsibility to a higher power. The midpoint on this continuum is “collaborative,” in which both the individual and a higher power are active (Pargament et al. 1988:92). Clearly, then, the main differentiating factor in this continuum is the degree of agency attributed to the individual and the higher power. An example of a conceptualization which is places relatively far to the “deferring” portion of this continuum is God Control, which “assesses the degree of control individuals attribute to God” (Pargament et al. 1982:1245). From this definition, one does not really work collaboratively with God, and God is not necessarily specifically guiding the individual. This is reflected in an item from the scale which asks, “If the plans I make work out, it is because they fit into God’s plan” (Pargament et al. 1982:1245). Hence, within this question, people are not necessarily guided by God towards certain decisions, and God’s control may even be in opposition to their own volition. A similar conceptualization, is Lawrence’s (1997) Providence scale, in which includes items such as, “God will always provide form me,” and “The voice of God tells me what to do.” This conceptualization therefore also sees the individual as relatively subordinate to an active higher power. However, a measure which is consciously collaborative in its perspective is Krause’s (2005:137) “God-

addition that an individual with a strong sense that a higher power controls life course trajectories and outcomes can nevertheless see himself or herself as active and agentic in this relationship indicates that sense of personal control and sense of mediated control,” which “is based on the notion that problems can be overcome, and goals in life can be reached by working together with God.” The degree to which this concept stresses collaboration can be seen in its measure, which includes the items, “All things are possible when I work together with God,” and “All things are possible when I work together with God.” Beyond the collaborative midpoint in this continuum is Lawrence’s (1997) Influence scale, which looks upon God as reactive to the individual’s own actions, so that God’s power becomes an instrument of the individual’s supplications. This can be seen in such items as, “When I obey God’s rules, God makes good things happen for me,” and “God almost always answers my prayers.” Along this continuum, in comparison to other measures that have been used to measure perceived control by a higher power, the measure of sense of divine control therefore falls between Krause’s (2005) God-mediated control measure and the God Control and Providence measures. In sense of divine control, people are seen as agentic and collaborative with God, but they are nevertheless subservient to God, who remains the final arbiter of one’s life and life course trajectory. The most important aspect of understanding that this continuum can provide, though, is that in the conceptualization of sense of divine control, even though God remains ultimately in control, control is not entirely external to the individual, and instead the individual participates with a higher power in determining life plans and directions.

divine control are not necessarily two opposite ends of a continuum, nor does a high level of one necessarily negate a high level of the other, so that both may be independently associated with psychological well-being.¹⁵

¹⁵ The idea that these two components of the self may not necessarily be two opposite ends of a continuum has been supported by research showing that seeing God as an active controlling agent is positively related to internality in an African-American Baptist sample (Jackson and Coursey 1988), but Schieman et al. (2005) found that relationships between sense of divine control and mastery varied, with a small negative relationship for whites and small positive relationship for African-Americans. In addition, Pargament et al. (1982) found a negative correlation between God Control and internal locus of control in a white sample of Protestants, Catholics and Jews. Tyler and Sinha (1988) found mixed evidence in a sample of Hindu pilgrims, with a principal components analysis showing that God Control did not load with scores on personal locus of control *or* scores for powerful others for men, but did load with scores on a powerful others measure for women, although Tyler and Sinha (1988) also warned that these findings are tentative due to the small number of women in their sample. However, evidence in an American sample demonstrated that perceptions of celestial and mortal control may not necessarily covary, as was described by Kunst, Bjorck, and Tan (2000), who used a vignette approach to demonstrate that attributions of responsibility to self were not correlated with scores on a God Control scale. In addition, in a relatively small sample of Canadian breast cancer survivors, Gall, de Renart, and Boonstra (2000) found that a measure of “God’s control of the individual” was not significantly correlated with

The effects of neighborhood disorder on sense of divine control may be important to consider for elders' mental health because sense of divine control may have important ramifications for psychological distress. The sense that there is a divine presence watching over and guiding our lives may be a powerful beneficial factor for mental health because it may lead to a sense that, with God's presence, positive outcomes are more likely (Krause 2005), as well as that one is valued and protected (Schieman et al. 2005). Conversely, the sense that our lives are not controlled by a higher power may lead to a sense of abandonment and alienation, that whether bad or good things happen are merely a matter of chance, and greater sense of threat. This sense of abandonment, randomness, and loss of safety may in turn lead to an increase in psychological distress. This has been demonstrated by Krause (2005), who found that, among senior citizens, an individual's sense that one can rely on God and work with God in life is positively related to life satisfaction. Similarly, feeling alienated or abandoned by God is positively related to anxiety and depression, and negatively related to life satisfaction (Exline, Yali, and Lobel 1999; Exline, Yali, and Sanderson 2000; Phillips et al. 2004). A closely related construct, religious doubts, also has been shown to be positively related to negative mood and depressed affect, as well as negatively related to positive mood (Krause et al. 1999;

locus of control. Overall, even with the aforementioned differences between the scales for sense of divine control and God Control, these results indicate that the belief that a higher power controls one's life may not consistently be associated with reduced sense of personal control, and therefore can not necessarily be seen as the opposite end of a continuum with high perceived control.

Pargament et al. 1998), although Krause et al. (1999) indicated that the effects on depressed mood lessen with increasing age. While few studies have specifically examined the effects of sense of divine control on mental health, Schieman et al. (2006) did find for some groups that sense of divine control was negatively related to depression and anxiety; however, they also found that sense of divine control was actually *positively* related to depression and anxiety for high SES whites, thereby reinforcing the view presented below of considering the race and SES contingencies of these effects. Overall, though, these studies support the idea that the loss of a sense of divine control due to perceived neighborhood disorder may be detrimentally related to elders' mental health.

A focus on the role of institutions within the stress process also leads us to examine whether involvement within institutions may prevent the effects of neighborhood disorder on this aspect of the self, thereby buffering the negative effects of neighborhood disorder on mental health. Theory within the sociology of religion suggests that, when faced with anomic conditions such as neighborhood disorder, involvement within the religious institution through religious activities may help prevent a loss of belief. As Berger (1967:40) argues:

Religious ritual has been a crucial instrument of this process of 'reminding.' Again and again it 'makes present' to those who participate in it the fundamental reality-definitions and their appropriate legitimations...The performances of the ritual are closely linked to the reiteration of the sacred formulas that 'make present' once more the names and deeds of the gods. Another way of putting this is to say that religious ideation is grounded in religious activity[.]

Engagement in religious activities serves to stabilize and deepen religious belief, as it makes "real" the substance of religious belief, so that engagement in

religious activity becomes the foundation of religious belief. The idea that religious activity may help to stabilize sense of divine control has been supported by Schieman and Bierman (2006), who used the data also used in this dissertation to show that, among elders over a two-year period, sense of divine control was more likely to decrease for individuals with a low level of religious attendance and a low level of prayer, and was most stable for those with a high level of attendance and prayer. Therefore, both public aspects of religious activities, such as attendance at religious services, as well as more private activities, such as prayer, may make more real the substance of one's belief, thereby preventing losses in sense of divine control due to perceived neighborhood disorder.

Furthermore, it is possible that specifically public religious activities, such as attendance at religious services, may be especially important for preventing the effects of neighborhood disorder on sense of divine control. An established sociological tenet is that religion helps form people into cohesive social groups, and, by extension, helps facilitate a cohesive community (Mattis and Jagers 2001). The power of attendance to facilitate this supportive community is demonstrated by research showing that attendance at religious services is positively related to church-based spiritual and emotional support, as well as perceptions of congregational cohesiveness (Krause 2002). Public involvement in religion may therefore not only facilitate involvement in a caring community which may provide a counterpoint to the cohesive community, but may also provide a conduit for supportive interactions which bolster one's sense of divine control, as is indicated by findings by Krause (2002) showing that cohesiveness and spiritual support are positively related to

feeling connected to God. This is also supported by research among Presbyterians showing that spiritual support from church members is positively related to positive religious coping when individuals face problems, such as looking to God for strength and letting go of anger at God (Krause et al. 2001). Hence, involvement in specifically public religious activities may help stabilize religious beliefs in the face of neighborhood disorder by providing an ordered, caring community in which to find refuge and in which support for one's spiritual beliefs are provided.

Research in role theory also suggests why involvement in public religious activities may especially help blunt the effects of neighborhood disorder on sense of divine control. Stryker (1980) proposed a structural version of symbolic interactionism in which the number of network connections attached to an individual's position in a specific role led to a higher level of salience of the identity associated with that role (as compared to the individual's other role-identities). The importance of this theory for religion was demonstrated by Stryker and Serpe (1982), who found that individuals' commitment to a religious role was related to the salience of religious identities. In the context of research cited above indicating that attendance leads to perceptions of more cohesive religious community and greater levels of church-based support (Krause 2002), this suggests that involvement in public religious activities will increase the salience of the religious identity. It is likely that it will be more difficult for individuals to discard the beliefs associated with a religious identity if the identity is extremely important to them. Therefore, involvement in specifically public religious activities may especially lessen the

impact of neighborhood disorder on sense of divine control by increasing the salience of the identity associated with these beliefs.¹⁶

Overall, then, it appears that the anomie which neighborhood disorder is likely to represent may call into question the religious framework which supports the socially constructed social order. This may especially impact a second component of the self, sense of divine control, and a loss of sense of divine control may substantially impact elders' psychological distress. However, involvement in the religious institutions through religious activities may help prevent the loss in sense of divine control. *Therefore, the second question I address in this dissertation is whether involvement in religious activities helps buffer the effects of neighborhood disorder on mental health by preventing a loss of sense of divine control.*

The Question of Race and SES

Within the stress process perspective, there is much attention to the ways in which the effects of stress may vary by social statuses (Pearlin 1999). When addressing the role of religion in mental health, two of the most important of these are likely to be race and socioeconomic status (SES). Race is especially important for sociological studies of mental health to consider when the role of religion is

¹⁶ Latkin and Curry (2003) did examine whether attendance at religious services buffered the effects of perceived disorder on change in depression and found little effect, but, as noted above, the generalizability of this study to the current research is seriously questionable.

being examined because “Racially based religious subcultures are a reality in America” (Roof and McKinney 1987:80), so that the role of religion in stress and mental health may vary greatly between African-Americans and whites. Similarly, the relationship between class, religion, and well-being has been of interest almost since the founding of the discipline, as can be seen works of founders of the field such as Durkheim (1951) and Marx (1975), as Durkheim studied whether religion was related to rates of suicide, while Marx examined the relationship between class and religion (Hamilton 1995). Below, I review research on how race and SES may lead to differences in the way that religious involvement moderates the relationships among neighborhood disorder, sense of divine control, and psychological distress.

Race. African-American churches have a long history of involvement in struggles against discrimination and struggles for social justice (Dressler 1991; Lincoln and Mamiya 1990), and this emphasis continues to be important in the African-American religious community (Baer and Singer 1992). At an individual level, this emphasis has led to the creation of opportunities within African-American religious services for congregants to share troubles and gain support from each other (Gilkes 1980). This emphasis on social support within the African-American church was clearly demonstrated by Griffith, Young, and Smith (1984) who studied of an African-American church service. Griffith et al. (1984) asked worshippers to describe the service freely and found that “participants predominantly described specific benefits, such as receiving help, gaining strength, and expressing feelings” (pg. 466). Hence, parishioners at this Black church focused on supportive and expressive functions when asked to describe the service,

while they gave only “moderate emphasis to religious aspects” (Griffith et al. 1984:466). This emphasis on social support within the African-American religious community is also indicated in comparisons between older African-Americans and whites, which show that African-Americans tend to report greater levels of church-based social support than whites (Krause 2002). Therefore, African-Americans may gain more support through public religious activity than whites when faced with what is perceived as neighborhood disorder, so that public religious activity may lessen the effects of neighborhood disorder on sense of divine control more for African-Americans than whites.

While the above refers more to public religious activity, the unique dimensions of African-American religious practices may mean that both public *and* private forms of religious involvement moderate the effects of neighborhood disorder on sense of divine control more strongly for African-Americans than whites. African-American religious traditions have emphasized “a profound sense of intimacy with the divine” (Mattis and Jagers 2001:523). This is in part an extension from the use of religion to resist oppression, as pre-Civil War slaves used religious spirituals to “focus on biblical passages that stress God's involvement in the liberation of oppressed people” (Cone 1972:59). Thus, the emphasis on the direct role of the divine in human affairs is a corner-stone of the development of Black religion in the United States.

The importance to African Americans of the divine's direct role in human affairs is reflected in research showing that white elders are more likely to refer to a divine other in impersonal and detached terms, while African-American elders are

more likely personalize a relationship with the divine, including using “ ‘personal parables’ to exemplify God’s role in their lives” (McAuley, Pecchioni, and Grant 2000:20). Not surprisingly, then, African-American elders demonstrate a higher level of sense of divine control than whites (Schieman and Bierman 2006) and also report higher levels of approaching life as a collaboration with God (Krause 2005). The greater emphasis of a direct, personal connection to the divine among African-Americans is also reflected in research showing that African-American elders more frequently spend time feeling the presence of God (Krause and Chatters 2005), tend to feel more connected to God (Krause 2002), and tend to have a greater sense of religious meaning (including the beliefs that God has a plan for an individual’s life and God has a reason for everything that happens to the individual) (Krause 2003a). Further indications of African-Americans’ greater belief in the involvement of the divine in everyday affairs is indicated by research showing that African-Americans are almost twice as likely as whites to believe that God acts through physicians to cure illness (Mansfield, Mitchell, and King 2002), as well as African-Americans’ stronger feelings of closeness to God (Taylor et al. 1996; Taylor, Mattis, and Chatters 1999). Given the importance of an immanent sense of divine for African-American religiosity, the reinforcement of religious beliefs through engagement in religious activities may be far more potent for the sense of divine control of African-Americans than whites.¹⁷

¹⁷ One may wonder whether African-Americans will necessarily attend predominantly Black churches, but “American religion has remained firmly

However, the greater strength of African-Americans' belief in a personal connection to the divine also suggests a second possibility regarding whether religious involvement will moderate the relationship between neighborhood disorder and sense of divine control. Since African-Americans tend to have a stronger investment in the belief that there is a divine presence active in everyone's life, African-Americans' belief in divine control may be more robust when faced with perceived neighborhood disorder. Consequently, *whites'* sense of divine control may need more reinforcement through ritual involvement in religion, and the moderating effects of this involvement would therefore be stronger for whites than African-Americans. This idea is supported by research showing that attendance actually has a stronger effect on elders' feelings of closeness to God for whites than African-Americans (Krause 2002), and church attendance is inversely related to elders' religious doubts more strongly for whites than African-Americans (Krause 2003b). Furthermore, Schieman and Bierman (2006) have recently used longitudinal data to show that *low* levels of religious involvement (both in terms of attendance and prayer) are more strongly related to decreases in divine control for whites than African-Americans, demonstrating how sense of divine control may be more stable for African-Americans than whites.

In short, there is evidence to indicate that the way in which religious involvement moderates the effects of neighborhood disorder on sense of divine control may vary by race, but the way in which this moderation may vary by race is

segregated, and African Americans choose their religious affiliations in what is essentially a separate religious market" (Sherkat 2002:485).

not clear from previous research. However, if involvement does moderate the effects of perceptions of neighborhood disorder on sense of divine control differently by race, and losses of sense of divine control lead to increases in psychological distress, this may lead to racial differences in the degree to which religious involvement buffers of the effects of neighborhood disorder on mental health.

Socioeconomic status. A second important aspect of social status to consider is that of socioeconomic status. Given the centrality of social class to sociology, one would expect class to be a key part of the sociological study of religion. However, a recent review article concluded that, “Social class, perhaps curiously, has received less attention in studies on religion than one might have imagined, given the continuing importance of social class as a reality and as a topic of sociological inquiry” (Wuthnow 2003:24). Given this deficit of study, and the significance of social class in sociology, it is important to consider how the efficacy of involvement in religious activities as a moderator for the effects of neighborhood disorder may vary by social class.

Traditionally, sociology has viewed religion as a means of respite for the underprivileged. As Stark (1964:699) explains, “This conception of religion, as functioning to assuage the suffering of those near the bottom of the social hierarchy, provided ready solution for social theorists who first pondered the role of religion in society and the reasons for variation in religious involvement.” This idea can be seen in the writings of Marx, who saw religion as both a consolation for those who suffered or were oppressed, and a perpetrator of the repressive social order by

making the repression bearable (Hamilton 1995). While this would suggest that socioeconomic status should be inversely related to religious involvement, as Stark (1986) later described, theorists were forced to revise this view in the face of conflicting evidence regarding socioeconomic status and religious involvement. The general idea behind this reformulation is that individuals may have two different desires, one for rewards which are available in a mortal realm but scarce, and a second desire for rewards which are not possible in a human realm (Stark 1986:218-219).¹⁸ In the case of rewards offered by the religious institution which may be obtainable but are scarce, individuals with a high level of social standing are likely to be able to gain these rewards, while those with a low social standing will be unable to gain access to these rewards; individuals who are lower in social standing will instead be forced to accept compensators, which are explanations that posit the attainment of the reward in the distant future (Stark and Bainbridge 1980). However, when rewards are completely unattainable, individuals at all level of social power will accept religious-based compensators (Stark and Bainbridge 1980).

In the context of the present research, this suggests that individuals of different social classes may derive different benefits from religious activity in relation to the effects of neighborhood disorder. In the face of a stressful, disordered ecological environment, individuals at lower SES conditions may be far more motivated to draw on religious involvement as a means of obtaining religious compensators than those at higher SES conditions. Consequently, individuals at

¹⁸ In this context, “rewards” are defined as “anything humans will incur costs to obtain” (Stark and Bainbridge 1980:115).

lower SES conditions may be more likely than those in higher SES conditions to use their religious involvement as a means of assuring themselves that “Everything has a purpose,” and God has a plan.” This can be seen in research showing that, independent of race, both education and income are negatively correlated with levels of divine relationships (Pollner 1989), and education is negatively related to sense of divine control (Schieman et al. 2005), feelings of connectedness with God (Krause 2002) and the tendency to rely on and work with God (Krause 2005). Involvement in religious activities may therefore be more important for preventing the effects of neighborhood disorder on the sense of divine control for those at lower levels of SES.

However, much like with race, the reverse is also possible. Individuals at lower levels of SES may be more accustomed to depending on a close, personal relationship with a divine other as a means of compensating for stresses that they face, and are therefore far less likely to lose a sense of divine control as a result of neighborhood disorder. In contrast, those at high levels of SES may be less used to relying on an external, divine power for support, and therefore may be far more likely to experience a decrease in a sense of divine control as their neighborhoods become more disordered; involvement in religious activities may therefore be far more necessary for shoring up the sense of divine control of individuals at higher levels of SES. Evidence for this possibility is provided by research showing that education is negatively related to religious meaning *only once church attendance and private prayer is controlled* (Krause 2003a), demonstrating how those at higher SES conditions may utilize involvement in religious ritual to maintain a sense of

religious meaning far more than those at low SES conditions. Additionally, Schieman and Bierman (2006) have recently shown how low levels of religious involvement are more strongly associated with decreases in divine control among high SES elders, *net* of race-linked contingencies. The sense of divine control of those at high SES conditions may therefore require far more religious reinforcement than those at lower levels of SES.

Overall, just as with race, there is evidence to indicate that the moderation of the effects of neighborhood disorder on sense of control by religious involvement may vary by SES, but evidence suggests the possibility that these moderating effects may be greater for high SES elders *or* low SES elders. Most important for this dissertation, though, is that if losses of sense of divine control lead to decreases in mental health, and religious involvement prevents losses in sense of divine control differently by SES, then the ability of religious involvement to buffer the mental health effects of perceived neighborhood disorder may vary by SES.

Change in The Self as Moderator of the Effects of Neighborhood Disorder on Mental Health

As discussed above, a stress process perspective suggests that personal resources may not only act as mediators for the effects of stress on health, they may also lessen the impact of stressors on health by buffering these effects (Pearlin 1999). However, the concept of “structural amplification” suggests a more complex scenario when studying *change* in the self (Ross et al. 2001). Specifically, *decreases* in the self may *accentuate* the effects of neighborhood disorder on mental

health. For this dissertation, the question of structural amplification is especially pertinent, because, as discussed above, it is hypothesized that neighborhood disorder may lead to decreases in sense of divine control and mastery, but these effects may vary by levels of institutional involvement. Consequently, in studying first how institutional involvement may prevent effects of neighborhood disorder on decreases in mastery and sense of divine control, and then how decreases in sense of divine control and mastery may exacerbate the effects of neighborhood disorder on mental health, I further demonstrate the importance of institutional involvement for the effects of perceived neighborhood disorder on mental health. Below, I describe how losses in each component of the self may amplify the effects of neighborhood disorder on mental health; further, while less central to the focus of this dissertation, I also describe how increases in these components of the self may prevent these mental health effects. However, a stress process perspective also calls for close attention to the way in which the effects of stress may vary by social statuses, leading us to also examine the degree to which the amplifying effects of losses in mastery and sense of divine control may vary by race, gender, and SES.

Loss of Mastery and Sense of Divine Control as Amplifiers

The buffering effects of sense of control have been repeatedly demonstrated in research on the effects of a variety of stressors, including income (Lachman and Weaver 1998), economic strain (Pudrovksa et al. 2005), and physical impairment (Jang et al. 2002; Schieman 1999), as well as chronic stress more generally (Wheaton 1983). Sense of control may buffer the effects of stress because

individuals with a greater sense of control over their lives tend to be less likely to see stressors as threatening and demoralizing, and also may be more efficient at working out strategies to address stress, while those with lower levels of personal control are likely to be less motivated and persistent in addressing the problems in their lives (Mirowsky and Ross 2003; Pudrovksa et al. 2005; Taylor and Aspinwall 1996; Wheaton 1983).

Changes in mastery may also moderate the effects of neighborhood disorder. Decreases in mastery may make the stress from neighborhood disorder more palpable. Believing themselves less able to influence positive outcomes in their lives, individuals may see themselves more at risk from the threat of disordered neighborhoods, as well as less able to identify safe situations (Ross et al. 2001). Furthermore, a decreasing sense that one can change the situation may lead individuals to see the disordered neighborhood as an ever-growing problem that is beyond their own power to correct, further exacerbating the stress of these social conditions and increasing a foreboding sense of threat. Conversely, greater levels of mastery may make neighborhood disorder seem less threatening and ominous (Pearlin 1999; Schieman and Meersman 2004), as individuals believe that they have more power to avoid harm (Ross et al. 2001), and believe that they can manage the neighborhood problems they face.

Little research has specifically examined how *change* in mastery moderates the mental health effects of neighborhood disorder, but cross-sectional research has shown that the effects of fear of victimization on depression are moderated by perceived control (Ross, Reynolds, and Geis 2000), and, specifically among older

adults, mastery has been shown to buffer the effects of perceived neighborhood disorder on anger (Schieman and Meersman 2004). In addition, while not specifically examining mental health, Ross et al. (2001) did use a longitudinal sample and a measure of change in perceived control to examine the effects of perceived neighborhood disorder on distrust and found that, even when baseline levels of powerlessness were controlled, increases in powerlessness amplified the effects of neighborhood disorder on changes in mistrust. Overall, then, while there is not a great amount of evidence, it does appear likely that the decreases in mastery associated with neighborhood disorder may amplify the effects of neighborhood disorder effects on mental health.

Sense of divine control may also moderate the effects of perceived neighborhood disorder on mental health. Ceding control to a higher power may be a way of coping with stressful experiences (Pargament 1997). Acknowledging that a more powerful force controls one's life may help people make sense out of pain and suffering by allowing individuals to believe that a higher power will offer rewards and punishments posthumously (Janoff-Bulman and Frantz 1997; Stark 1999), or that the suffering has a larger purpose that is a part of God's plan (Peterson et al. 1991). Individuals may also find the surrender comforting in the face of stress because they believe this higher power responds to the individual's prayers or pleas for divine intercession (Koenig 1994), helping them to feel less threatened from the neighborhood disorder. However, loss of this sense of divine control may exacerbate the stress of living in a disordered neighborhood. The suffering individuals experience may seem senseless, and the inexplicable nature of this stress

may leave individuals with a sense of always being under attack, while a sense of threat may also loom more greatly as individuals perceive themselves to be less protected by a higher power.

Research has generally not examined how transitions in religious belief may moderate the effects of stress, and research on divine control has yet to examine its moderating properties. However, research has examined whether concepts similar to sense of divine control moderate the effects of stress. For instance, Ellison et al. (2001) found that belief in eternal life prevented effects of chronic health and financial problems on mental health, while Krause (2006a) found that effects of observer-based ratings of neighborhood conditions on changes in self-rated health were significantly buffered by gratitude towards God. In addition, Gall (2003) examined a relatively small sample of older adults suffering from a physical illness and found that seeing the illness as a part of God's will lead to greater efforts to see the positive points in the situation, suggesting that a loss of sense of divine control may lead to seeing neighborhood disorder as less positive and more menacing. While this research shows that levels of religious beliefs related to sense of divine control buffered stress, it should be remembered that this research does not show whether changes in these beliefs moderated stress. However, evidence of their beneficial effects supports the idea that losses in these resources may leave individuals more at risk for the detrimental effects of stress.

Overall, then, it appears that losses in mastery and sense of divine control may amplify the effects of neighborhood disorder on mental health, but that gains in these resources may weaken these effects. Examination of the way loss of mastery

and sense of divine control amplifies the effects of neighborhood disorder will further help explicate the role of institutional involvement in the mental health effects of neighborhood disorder because institutional involvement may prevent loss of mastery and sense of divine control. *Therefore, the third question I examine in this dissertation is whether the loss of mastery and sense of divine control due to neighborhood disorder exacerbates the effects of neighborhood disorder on mental health.*

Differences in Moderation by Social Status

It is likely that the degree to which changes in the self moderate the effects of perceived neighborhood disorder vary by social status. The gendered differences in the effects of stress on mental health reviewed above (e.g., Aneshensel et al. 1991), suggest that the effects of structural amplification may vary by gender, as loss of the mastery and sense of divine control may amplify the effects of neighborhood disorder more for internalizing symptoms (such as depression) for women and externalizing symptoms (such as anger) for men. Therefore, it is important to examine the role of gender in the way that loss of both sense of divine control and mastery may moderate the mental health effects of neighborhood disorder.

Furthermore, loss in mastery and sense of divine control may moderate the effects of neighborhood disorder differently not only by gender, but also race and SES, in part because the distribution of coping resources often varies by social status, with more advantaged groups possessing greater levels of coping resources

(Pearlin and Schooler 1978; Thoits 1984). Consequently, as mastery and sense of divine control decrease, the perception of danger from living in a disordered neighborhood may become especially more ominous for elders at lower levels of social status because there are fewer alternative psychological or social resources to reassure them.

Furthermore, in terms of mastery specifically, individuals who lose the same amount of mastery may be affected very differentially because the advantaged distribution of coping resources extends to mastery, as perceived control tends to be greater for men, whites, and individuals at higher levels of SES (Bruce and Thornton 2004; Mirowsky, Ross and Van Willigen 1996; Pearlin and Schooler 1978; Shaw and Krause 2001).¹⁹ These findings suggest that losses in mastery may have very different meanings due to elders' social status. Those who begin the study at lower levels of control and lose mastery may be reduced to feelings of only some or very little control; however, even with these same reductions, individuals who began the study with a higher level of perceived control may retain enough of a sense of control to continue to retain a sense that their lives can be managed and predicted. Hence, losses in mastery may leave individuals at lower social standing feeling more vulnerable to the effects of neighborhood disorder, so that the

¹⁹ From a sociological perspective, these patterns are quite understandable, because perceptions of control are often the subjective reflection of objective conditions (Ross and Mirowsky 2003), so that lower levels of perceptions of control may be a psychological reflection of these individuals' lower social standing.

consequences of structural amplification may have more potent effects for the mental health of women, African-Americans and people with less SES.

While research has shown that the distribution of sense of divine control may not necessarily be greater in groups with greater social status (Schieman and Bierman 2006), there are additional, religion-specific reasons why the moderating effects of loss sense of divine control may vary by race and SES. The centrality of religion in African-American life (Sherkat 2002), especially as a resource in times of trouble (Gilkes 1980; Griffith et al. 1984), as well as the importance of “a profound sense of intimacy with the divine” (Mattis and Jagers 2001:523) among African-Americans, may mean that the loss of this resource leaves African-Americans feeling more at risk due to neighborhood disorder than whites. Support for this idea is provided by Krause (2003a), who found that religious meaning was more strongly connected to the optimism of African-American elders than whites, so that the loss of a sense of purpose and meaning which may follow loss of sense of divine control may lead to greater losses in optimism for African-Americans than whites, leading to a greater sense of threat due to neighborhood disorder.

Similarly, if religion is more likely to be used as a compensator by individuals who are low in social power (Stark and Bainbridge 1980), it is more likely that the loss of sense of divine control will affect individuals who are lower in SES. Furthermore, Krause (2006b) also argues that those at higher levels of SES will be better able to grapple with religious doubts because higher levels of education and autonomous, creativity-requiring jobs provide more skills to deal with skepticism and questioning, as well as more self-confidence in resolving doubt.

This would again suggest that the effects of neighborhood disorder would be amplified by loss of a sense of divine control more for those who are lower in SES. The possibility of differential structural amplification by SES for sense of divine control is supported by research using a longitudinal study of elders which found that initial levels of religious doubt were more strongly related to decreases in life satisfaction over time for individuals who were lower in education (Krause 2006b).

Summary and Expectations for Analyses

This literature review addressed a sociological perspective on the relationship between stress and mental health. Within this perspective, stress is expected to affect mental health indirectly, in part by denigrating the self. This perspective also suggests that the structural arrangements in which individuals are embedded may condition the effects of stress on mental health. Based on Turner's (1997) work on the institutional structure of society, institutional involvement may be useful as a powerful indicator of individual enmeshment within structural arrangements. Involvement in institutions such as the family and religion may therefore prevent the effects of stress on mental health by preventing the loss of self. However, a stress process perspectives emphasizes that master statuses are endemic to each part of the stress processes, suggesting that a concomitant focus must be placed on examining the extent to which the protective effects of institutional involvement vary by social status. In addition, previous research on neighborhood effects suggests that the loss of psychological resources may exacerbate the effects of stress in a process of "structural amplification." Therefore, institutional

involvement may protect mental health both by preventing the indirect effects of stress on mental health and by preventing the process of structural amplification. However, in integrating the concept of structural amplification into a stress process perspective, we are also lead to examine how structural amplification may vary by different aspects of social status.

This literature review then examined previous research on the mental health effects of neighborhood disorder in light of this theoretical review. Previous research suggests that neighborhood disorder may negatively affect mental health by reducing mastery, but research also indicates that involvement in the family though marriage may bolster elders' sense of control. Research also indicates that the benefits of marriage may vary by gender. While there is less research on the religious effects of neighborhood disorder, theory and research in the sociology of religion suggest that anomic conditions may call into question the religious legitimations of the social construction of reality, thereby undermining a sense of divine control, leading to increases in psychological distress. However, involvement in religion through religious activities such as prayer or religious attendance may reinforce a sense of divine control, although this reinforcement may vary by both race and SES. There was also a dearth of research examining whether changes in the self may amplify the effects of neighborhood disorder on mental health. Cross-sectional research does indicate that mastery may buffer the effects of neighborhood disorder on mental health, and longitudinal research suggests that change in perceived control may moderate the effects of neighborhood disorder on mistrust. Furthermore, cross-sectional research also indicates that concepts similar

to sense of divine control moderate the effects of stress. Loss of mastery and sense of divine control may therefore amplify the mental health effects of neighborhood disorder by leaving individuals feeling more vulnerable when faced with this disorder, although research also suggests that these effects vary by social status.

Based on this literature review, in the analyses presented below I expect that neighborhood disorder will be related to decreases in mastery, but this relationship will be much weaker for the married. I also expect that neighborhood disorder will be related to increases in depression and anger, but these relationships will be much weaker for the married. In addition, I expect differences between the married and non-married in the effects of neighborhood disorder on depression and anger to be reduced to non-significance when change in mastery is controlled. Furthermore, I also investigate whether the ability of marriage to moderate the effects of neighborhood disorder varies by gender.

I expect that neighborhood disorder will be related to decreases in sense of divine control, but these effects will be weaker for elders who are more involved in religion through religious activities, both in terms of private and public forms of religious activity. I also expect that neighborhood disorder will be related to increases in depression and anger, but these relationship will weaken the more frequently elders pray or attend religious services. In addition, I expect differences by religious involvement in the effects of neighborhood disorder on depression and anger to be reduced to non-significance when change in sense of divine control is

controlled. Furthermore, I also investigate whether the moderating effects of religious involvement vary by race and SES.²⁰

Finally, I also investigate whether changes in mastery and sense of divine control moderate the effects of neighborhood disorder on mental health. I expect that decreases in both of these resources will strengthen the detrimental effects of neighborhood disorder on mental health. Further, while increases in the self are not the central focus of this dissertation because they are less likely to be linked to neighborhood disorder, it is also expected that increases in these aspects of the self concept will weaken the effects of neighborhood disorder on mental health. In addition, I expect that the moderating effects of change in mastery and sense of divine control will vary by race, gender, and SES.

Before presenting these analyses, I first describe the methods utilized in this dissertation. In the next chapter, I begin by describing the source of data used in this dissertation, and then describe the measures of variables, as well as procedures for dealing with bias due to attrition in the sample over time. Finally, I describe my analytic models for addressing these research questions.

²⁰ It should be noted that these expectations do not address the extent to which marriage or religious involvement directly affect mental health, as well as whether the effects of marriage and religious involvement vary by neighborhood. While these additional relationships are of importance, they are outside the scope of the current study.

CHAPTER 3. METHODS

Data

Data for this study come from the Aging, Stress and Health (ASH) study. The ASH study is a longitudinal study of people 65 years and older residing in the District of Columbia and two adjoining Maryland counties, Prince George's and Montgomery. Consistent with the purpose of the project to investigate status inequality and health disparities, a socially and economically diverse sample was sought. The three locales subsume this diversity. Sample selection and recruitment began with the Medicare Beneficiary files for the three areas. In addition to the names of all people 65 years and older who are entitled to Medicare, the files provided information about the race and gender of each beneficiary. The next step entailed selection from the large pool of potential participants.

To maximize the social and economic diversity within the sample, a total of 4,800 names were randomly selected, equally divided among the three locales, blacks and whites, women and men, creating 12 groups, each containing 400 names. The goal was to enlist a sample of 1,200 people living independently, with approximately 100 in each of the 12 groups. Approximately 65 percent of all eligible respondents (1,741) who were contacted agreed to participate, yielding 1,167 cases. Interviews for wave 1 occurred during 2000-2001; two additional interviews were conducted, each one-year apart. Interviews in the first wave were in person, while the shorter follow-up interviews were conducted over the telephone. Of the original 1,167 elders, 915 individuals (78.4 percent) were interviewed throughout the study. Respondents were asked questions regarding

neighborhood disorder only at wave 1; for this reason, in the following analyses, I use only those individuals who remained in the same residence throughout the study, yielding a final sample size of 861. Listwise deletion reduces this sample only slightly, to 827.

Although it was not the goal of the researchers to obtain a representative sample of older adults in these locales, (Schieman and Meersman 2004) indicated that the age, gender, and racial composition of the sample roughly mirrors that of the population. However, this distribution obscures the variation between the three locales in this sample, and the necessity to oversample certain populations to achieve the intended variation in race and gender in the sample. Specifically, the sampling strategy of a half black and half white sample required oversampling blacks in Montgomery County (Pearlin and Bierman 2006). Furthermore, Prince George's County is the most affluent black-majority county in the U.S.; consequently, the number of middle and upper-class blacks in this sample is far out of proportion for their presence in the population, although this is advantageous in that it allows greater ability to reliably distinguish class and race effects. In discussing their use of data derived from the first wave of the survey, Pearlin and Bierman (2006:7) acknowledge its lack of representativeness, but argue that

Within a sample of modest size, such as ours, this exploration depends more on the range and diversity of relevant conditions than their representative distribution in the population. Although the *magnitude* of the relationships found in this sample can be expected to differ from those in other samples, there is reason to believe that the direction and importance of relationships reported here are similar to those that would emerge from analyses conducted elsewhere.

Therefore, the diversity with which this sample was intentionally gathered should assure that the patterns observed within this data will generally be observed in more representative data sets.

Table 1 has descriptives for all variables used in the study, along with correlations between focal independent variables and all variables used in this dissertation.²¹ This table indicates that the racial and gender distribution of the sample at wave 1 was generally retained in the reduced sample. Of the 827 respondents in the sample, 418 (50.5%) were women and 409 were men; 410 (49.6%) were Black and 417 (50.4%) were white. In addition, approximately half

²¹ One concern this table may not address is whether institutional involvement itself may vary by neighborhood disorder, which is important, because, although it is generally assumed in this dissertation that institutional involvement is exogenous with respect to disordered neighborhoods, it is possible that endogeneity may bias interactions between institutional involvement and perceived disorder. Ancillary analyses showed that neighborhood disorder was not correlated with either measure of religious involvement. Although there was a significant ($p < .05$) difference between the married and non-married in neighborhood disorder, the difference in means between the two groups was extremely small—approximately .06—suggesting little substantial difference between the married and non-married in neighborhood disorder. While bias due to endogeneity can not be completely ruled out, these analyses suggest that endogeneity is not a major influence on the interactions in these analyses. In addition, the use of longitudinal data helps rule out selection effects.

of the sample had at least some college education (406), and approximately half of the sample was married (453). The means in this table also indicate that, on average, elders in this sample tended to participate in religious services two to three times a month and prayed between several times a week and once a day.

Measures

Dependent Variables

Depression. Respondents indicated how often they experienced six symptoms of depression over the past week: “lack enthusiasm for doing anything,” “feel bored or have little interest in things,” “cry easily or feel like crying,” “feel downhearted or blue,” “feel slowed down or low in energy,” and “blame yourself for everything that goes wrong.” Response choices were “no days” (1), “1 or 2 days” (2), “3 or 4 days” (3), and “5 or more days” (4). Responses were averaged to create a scale of depression (Cronbach’s alpha = .78 at wave 1 and .76 at wave 3), with anyone who answered less than half the items dropped from the sample and higher scores indicating higher levels of depression.

Anger. Respondents indicated how often they experienced five symptoms of anger over the past week: “feel very critical of others,” “become easily annoyed or irritated,” “argue with someone,” “feel angry,” and “yell at someone.” Response choices were the same as with the depression items. Responses were averaged to create a scale of anger (Cronbach’s alpha = .78 at wave 1 and .71 at wave 3), anyone who answered less than two of the items dropped from the sample and higher scores indicating greater sense of anger.

Mastery. Sense of control was measured using five items from Pearlin and Schooler's (1978) mastery scale. Questions on the scale include "You have little control over the things that happen to you," "There is really no way you can solve some of the problems you have," "You often feel helpless in dealing with problems of life," "Sometimes you feel that you are being pushed around in life," "You can do just about anything you really set your mind to." Response choices are: "Strongly agree" (1), "Agree" (2), "Disagree" (3), and "Strongly disagree" (4). All responses were coded so that higher values indicated greater sense of control. Responses were averaged to create a mastery scale (Cronbach's alpha = .72 at wave 1 and .71 at wave 3), with anyone who answered less than two of the items dropped from the sample and higher scores indicating greater sense of mastery.

Sense of divine control. Sense of divine control was measured using a four-item scale: "You decide what to do without relying on God," "When good or bad things happen, you see it as part of God's plan for you", "God has decided what your life shall be", and "You depend on God for help and guidance." The response scale was the same as for mastery and mattering. These items were created to reflect an array of elements, including reliance, control, dependence, and guidance (Krause 2002; 2005). On balance, they are suggestive of an overarching belief in an omnipotent, controlling God who is personally involved in one's affairs (see Schieman et al. 2005 for a description of the measure's item properties and other details). Responses were averaged to create a scale of sense of divine control (Cronbach's alpha = .85 at wave 1 and .83 at wave 3), with anyone who answered

less than half the items dropped from the sample and higher scores indicating greater sense of divine control.

Independent Variables

Perceptions of neighborhood disorder. The scale of perceptions of neighborhood disorder is an eight-item scale adapted from Ross and Mirowsky's (1999) neighborhood disorder scale. This scale measures perceptions of both physical and social dysfunctions within the neighborhood, and therefore provides a broad overview of respondents' perceptions of disorder in their neighborhoods. Items on the scale are: "Your neighborhood is noisy," "There is vandalism," "There are run-down houses or buildings," "There is trash on the streets," "People hang around on the streets," "There is crime," "There is alcohol and drug use," and "There is heavy traffic." Respondents indicated the degree to which each statement described how much they saw and experienced in their neighborhood, with possible responses including "Not at all" (1), "Somewhat" (2), "Quite a bit" (3), and "Very much" (4). Responses were averaged to create a scale of perceived neighborhood disorder (Cronbach's alpha = .81), with anyone who answered less than half the items dropped from the sample and higher scores indicating greater disorder.²²

²² A principal components analysis of the items from the neighborhood disorder, mastery, and divine control scales produced three components with eigenvalues above 1, and together these components accounted for approximately 55% of the variance in the data. When three components were extracted and submitted to a varimax rotation, items loaded above .4 only for their scales' respective

Religious activity. Idler et al. (2003) used the GSS to test a variety of items regarding religiosity and define different dimensions of religiosity. Within this framework, they differentiate between “public” religious practices and “private” religious practices. Public religious activities include attendance at religious services and other non-worship activities with a religious group, such as religious education and volunteer activities, while private religious practices include “behaviors take place in the home, or generally in daily life, alone or with family” (Idler et al. 2003:341). Idler et al. (2003:336) specifically include attendance at religious services as a public measure and frequency of prayer as a private measure, and both of these measures were available within the ASH data. *Attendance at religious services* and other activities was measured using one question which asked respondents how often they, “Go to religious services/activities,” with possible responses including “Never” (6), “Once a month or less” (5), “2-3 times a month” (4), “1-2 times a week” (3), “3-4 times a week” (2), and “Daily” (1). All responses were reverse-coded. Following Schieman and Bierman (2006), the top two categories of religious attendance were combined into a category of “3 or more times a week” because of few responses at the top category.²³ The indicator of

components. The pattern of results for mastery and divine control was similar when the neighborhood disorder items were removed and the principal components analysis repeated, as well as when the wave 3 measures of mastery and divine control were analyzed.

²³ For five individuals, non-responses were imputed using race and gender as predictors.

private religious activity, *prayer*, was measured by asking respondents, “About how often do you pray?” Response choices are: “Never” (1), “Less than once a week” (2), “Once a week” (3), “Several times a week” (4), “Once a day” (5), and “Several times a day” (6). For 39 individuals who did not respond to this item, responses were imputed based on a regression using race and sex as predictors. A dichotomous “flag” variable was also created to control and test for bias in this imputation.

Marital status. Marital status was measured as a dichotomous variable in which 1=married. Some authors have been critical of previous mental health research involving marriage which has not split the non-married into separate groups (e.g., Bierman et al. 2006). However, because this research was focused on the advantage accrued through the state of having a marital partner, rather than the way in which resources may vary by non-married group, it was more appropriate to measure this aspect of institutional involvement with a dichotomous variable. In addition, prior research which has differentiated non-married groups has used sample sizes in the thousands (e.g., Simon 2002), which allows for much larger cell sizes and statistical power than would be possible in this study if the non-married were broken into specific groups.

Gender is coded so that men=0 and women=1.

Race is coded so that white=0 and African-American=1.

Socioeconomic status. Socioeconomic status was measured using a measure of educational attainment. Education is often a powerful predictor of health outcomes, and these effects may actually increase with age (Ross and Wu 1996), but

it is admittedly limited in that it is established relatively early in adulthood. However, there were two main reasons why education was used as the primary indicator of socioeconomic status within this dissertation. First, education is strongly linked to later socioeconomic status, including income and occupational attainment (Treiman 1992), so that a measure of education is likely to be a good overall indicator of socioeconomic status. Second, the two main alternative measures, occupational prestige and current income, had even greater drawbacks. Occupational prestige was limited in a number of ways. First, this measure referred to the main job people had in their lifetimes, which did not specify the extent of time to which individuals held these jobs, and, second, many people indicated that they did not hold a job during their lives. For women, these drawbacks are especially important, because, in the sample under study, women were less likely to work, or may have held a job only until childbirth. Even for men, such a measure may misrepresent one's career, as the promotions which may occur less frequently as one is established within a career result in a situation where the more prestigious final status is not the one reported in this measure. Income is also relatively compromised because of the age of the sample, as many in this sample are retired, so that a measure of current income may drastically underestimate overall socioeconomic status. It is likely for this reason that some previous studies on health in older adults have depended on education as the primary measure of socioeconomic status (e.g., Jang et al. 2005; Norton et al. 2006; Krause 1998).²⁴

²⁴ One additional important question which is raised when examining education and neighborhood disorder is whether the distribution of neighborhood disadvantage

Education was measured in terms of educational experience, from low to high (1 – 6): “8th grade or less” “some high school but did not graduate,” “high school graduate or GED,” “specialized (vocational) training,” “some college but no degree earned,” and “college graduate or more.”²⁵

means that only those with lower levels of educational attainment are exposed to neighborhood disorder. However, the age of this sample helps alleviate some of these concerns, as older adults will often remain rooted to a residence which they have lived in for many years and may very well own, even if the neighborhood in which this residence is located has experienced a down-turn over the years. Both patterns can be seen in the current data. While there is a significant difference in means between elders with lower and higher levels of education ($p < .001$), this difference is relatively small, less than .15 in difference. In addition, examination of the distribution of neighborhood disorder within the two groups showed that elders in each group report a moderate level of neighborhood disorder (although not many people in either group report high levels of neighborhood disorder), with one person in each group scoring a mean of “very much.” Overall, then, while there are some differences in the neighborhood disorder experienced by individuals at different levels of education, there is enough similarity that it is not likely that differences in relationships by education would be due to differences in levels of exposure to neighborhood disorder by education. Additional analyses showed that there were no significant mean differences in neighborhood disorder by race or gender.

²⁵ For thirteen respondents for whom level of education was missing, non-responses were imputed using a regression with age, race, and gender as predictors.

Control Variables

Physical limitations. Previous research has shown that religious attendance and involvement in religious activities is linked with individuals' health-related physical limitations (Ainlay, Singleton, and Swigert 1992), suggesting that part of the relationship between religion and health may be due to a situation whereby individuals with poorer health are less able to be involved in public forms of religion. Additionally, elders who are more mobile may be less threatened by neighborhood disorder because of the increased ability to journey in and out of the neighborhood. To account for these possibilities, an eight-item scale was used to control for physical limitations at wave 1. Respondents indicated the level of difficulty they experienced with nine common tasks: "Dress and undress yourself," "Get in and out of bed," "Take a bath or shower," "Get to and use the toilet," "Climb up the stairs," "Keep your balance while walking," "Go food shopping," "Get from your home to where you need to go." Possible responses were: "Without difficulty" (1), "With difficulty, but without help" (2), "With a little help from someone" (3), "Unable to do this without complete help from someone or special equipment" (4).²⁶ Responses were averaged to create a scale of physical limitations (Cronbach's alpha = .87), with higher scores indicating more limitations. Scores for 24 missing cases were imputed using the sample mean.

²⁶ An additional item on this measure, "Figure out your own monthly bills," was not used because this refers to cognitive limitations, and the express purpose of the use of this scale is to control for physical limitations.

Working for pay. Because elders who are currently working may be in the neighborhood less often, and the social setting of work may also provide a sense of personal control, working for pay was also included to account for this possibility by including a dichotomous variable in which a value of 1 indicated currently working for pay in the first wave.

Financial Strain. Because individuals who live in more disordered neighborhoods may also experience greater levels of financial strain, and financial strain has been shown to have a caustic, wearing effect on mental health (Pearlin 1999), a measure of financial strain was included to rule out this possible source of spuriousness. Respondents indicated their degree of difficulty, from a scale of 1 (Not at all difficult) to 3 (Very difficult) of meeting five needs: Housing, Food, Transportation costs, Medical expenses, and Clothing. Responses were averaged to create a scale of financial strain (Cronbach's alpha = .82), with higher scores indicating greater levels of financial strain.

Anxiety. It is possible that individuals with a higher level of anxiety may be more likely to perceive disorder in their neighborhood. It is especially important to account for this possibility when examining mental health outcomes, because greater levels of anxiety are likely to be associated with decreases in mental health. By the same token, if we find effects of neighborhood disorder on mental health while controlling for anxiety, this lends confidence to the robustness of these effects. Anxiety was measured with five symptoms: "feel tense or keyed up," "feel afraid or fearful," "worry," "feel nervous or shaky," "and have trouble getting to sleep or staying asleep." Question and response formats were the same as for anger

and depression. Responses were averaged to create a scale of anxiety (Cronbach's alpha = .72), with anyone who answered less than two items dropped from the sample and higher scores indicating greater anxiety.

Social integration. Research on the importance of social connections when faced with disordered neighborhoods (e.g., Ross and Jang 2000; Thompson and Krause 1998) indicates the importance of controlling for alternative sources of social support when examining the buffering effects of marriage and religion. A number of controls are therefore included to account for social connections and community activities. Frequency of going “to a club or organizational meeting,” “Do volunteer work,” “Go to the movies or theater,” “Visit with friends,” and “Talk to friends and relatives on the phone” are used to measure social and community connections, with the response format for all items the same as for religious attendance. For no measure were more than eight respondents missing, and for these cases non-responses were coded at the mean for the sample. Having a *living biological, adopted, or step-child* is indicated by a dichotomous variable, while *number of people in the home* is indicated by a continuous variable.²⁷ *Caregiving* may also provide a sense of mastery, and caregiving was controlled using a series of dichotomous variables, in which the first indicated if the respondent was currently

²⁷ Because approximately 60 people did not respond to the question regarding number of people in the home, non-responses to this question were imputed using a multiple regression in which sex, race, marital status, and have a living child were the predictors, and a “flag” variable was created to control for this imputation.

providing care for a grandchild or other young relative, while the second indicated if the respondent was providing care for a spouse.

Time in neighborhood. Since access to social support and other resources varies vary by tenure of residence (Oh 2003), time in the neighborhood was measured by controlling for years spent at the address. Individuals who had lived in the address less than a year were given a value of 1.²⁸

Marital transition and time in status. Losing one's spouse, either through death or divorce, during the course of the two years would likely also lessen the protective effects of marriage. To control for this possibility, transition out of marriage was also included as a dichotomous variable, for which respondents received a score of 1 if they indicated that they were married at wave 1 and non-married at wave 3. It should also be noted that only 28 people in the final sample transitioned out of marriage during the two-year interval, so there were an insufficient number of cases to make transition out of marriage a focal independent variable within this research. Individuals may also differ in their resources based on their time in marital status. To account for this possibility, a measure of time in

²⁸ One respondent in the final sample was missing for this variable. Exploratory analyses showed that this respondent was an African-American home-owner. Mean years of residence for African-American home-owners was approximately 28 years, and this value was imputed for this case.

marital status (in terms of number of years) was also included, as was a measure of whether the respondent had ever been separated or divorced.²⁹

Analyses

Previous research on neighborhood effects has utilized statistical methods which take the clustering of individuals into account (Geis and Ross 1998; Schieman 2005), thereby avoiding biases in the estimation of standard errors. However, these statistical methods are used because the analyses specifically take neighborhood-level factors into account. Because the current research is concentrated on *individual-level perceptions*, more common methods which do not take clustering account are appropriate, and this has been the case in previous research where perceptions of neighborhood disorder are the focal independent variable and neighborhood-level factors are not included in the analyses (e.g., Hill et al. 2005; Schieman and Meersman 2004).

²⁹ Transitioning into marriage might also provide protective benefits. However, due to the age of the sample, transitioning into marriage was extremely rare. In the final sample, only 6 people in wave 3 (less than 1%) were married who were not married in wave 1. A dummy variable which would control for this transition would essentially be incapable of achieving statistical significance. Therefore, this transition was not controlled. Additionally, these individuals were retained in the non-married category of the marital status dichotomous variable, which made this a somewhat conservative test of the protective benefits of marital status.

Therefore, in this research ordinary least-squares (OLS) regression is used to examine how perceived neighborhood disorder is related to changes in the self and mental health. Following previous analyses on influences on changes in mental health (e.g., Mirowsky and Ross 2001), change between wave 1 and wave 3 is used as the dependent variable, with status at time 1 included as an independent variable to control for regression to the mean. By extension, when change in the self is used as a moderator to examine structural amplification, baseline mastery is also controlled, and the measure of change in mastery is again scores at time 1 subtracted from scores at time 3. In addition, within all models, marital status, attendance, and prayer will be included to prevent spurious correlation due to involvement in multiple institutions.

It should be noted, however, that an examination of change does not rule out change in *either direction*. That is, while the primary interest within this dissertation is in loss of the self and increases in psychological distress, it is nearly a certainty that at least *some* individuals studied within this dissertation will experiences increases in the self and/or increases in mental health. Within this dissertation, these beneficial increases are not of primary interest because they likely to be unrelated to the focal relationship under study—that of the effects of neighborhood disorder. Therefore, the primary focus within the analyses and presentation of these analyses will be on the detrimental effects of neighborhood disorder. However, salutary changes will not be ignored, and will be acknowledged in two ways. First, in interpreting how changes in the self are related to changes in mental health, the degree to which both increases and decreases in the self affect

mental health will be addressed. Second, in examining how losses in the self amplify the effects of neighborhood disorder on mental health, the degree to which increases in the self also buffer these effects will be addressed. Again, though, the main focus of the discussion of results will be on losses in the self and increases in psychological distress because this is the direction of effects expected to occur due to neighborhood disorder.

One important issue when dealing with longitudinal data is the question of whether survey attrition may bias results. For the sociological study of elders, this is an especially important question because elders who have been exposed to a lifetime of stresses may be more likely to die during the time between observations. The loss of these individuals may therefore bias the estimation of the effects of social status, among other indicators. However, one way of countering this bias is by including a hazard for attrition in all multivariate analyses. In this strategy, a selection model which indicates whether the respondent participated in the follow-up survey is created using a probit model; all independent variables at wave 1 are entered into the model (Sales et al. 2004). The residuals from this model are then transformed using the ratio of the standard normal probability density function and the cumulative density; the resulting transformed variable is referred to as the “Inverse Mills Ratio” (IMR) (Sales et al. 2004). The IMR is then entered in the OLS regression as an additional independent variable and, in theory, the estimation of the coefficients for the independent variables is free of bias due to sample attrition. However, since the variables which are being used to predict hazard of attrition are the same variables which are being used to model the outcomes of

interest, inclusion of the IMR in OLS regression can often lead to strong multicollinearity. To guard against multicollinearity in the OLS regression, it is recommended that the probit selection equation contain at least one variable that is not included in the OLS regression (Sales et al. 2004).

Based on this recommendation, in all models for hazard of attrition, I include two additional measures which are likely to predict attrition. The first is a measure of the interviewer's rating of the respondent's understanding of the questions. Interviewers indicated if the respondent's understanding was good (85.69%), fair (7.37%), or poor (1.2%), with 5.74% of cases missing on this variable. Interviewer's ratings were coded as a series of dummy variables, with "good" as the reference group and "missing" included as a separate dummy variable. In addition, a measure of physical health status was used to predict attrition using a scale of nine physical illness symptoms: "headaches," "indigestion, heartburn, or upset stomach," "constipation or diarrhea," "sudden feelings of weakness or faintness," "back pain," "shortness of breath," "incontinence," "muscle aches or soreness," and "heart palpitations." Respondents were asked to indicate how often they had experienced each symptom in the previous month, with possible responses including "Never" (1), "1 time" (2), "2-3 times" (3), "4-5 times" (4), and "More than 5 times" (5). Responses were averaged to create a scale of physical illness symptoms (Cronbach's alpha = .71), with higher scores indicating worse health. Inclusion of these measures in the probit model, but not the main analyses, therefore helps guard against the possibility of biases due to multicollinearity. In addition, for all analyses, all wave 1 variables used in this dissertation are included in the hazard model,

regardless of whether they are currently being used in the analyses of interest, thereby further guarding against multicollinearity.

The results of this probit regression are available in Appendix A. As can be seen in this table, few of the baseline variables used in the main analyses predict attrition. Elders who were currently working were more likely to be in wave 3, as were elders with greater levels of mastery and elders with a living child. However, older elders, and, somewhat surprisingly, elders with more people in their home were less likely to be in wave 3. It should also be noted that interviewer's ratings of respondent's fair and poor understanding of questions were both independently related to greater risk of attrition, while the missing variable is not. Most importantly, the main independent variable of interest, neighborhood disorder, was unrelated to risk of attrition, as were sense of divine control, depression, or anger at wave 1, suggesting that the biases in these analyses due to attrition are most likely limited. Furthermore, while the pseudo- R^2 is at best a rough approximation of the R^2 used in OLS regressions, it is still worthwhile to note that the value of the pseudo- R^2 is less than .10. This suggests that the overwhelming majority of attrition within the sample was random with respect to the predictors used in these analyses, so that biases due to attrition were not great. However, as an extra compensator for bias, the hazard for attrition will still be included in all main analyses, suggesting that there should be only minimal biases in these analyses due to attrition.

Analyses will take place in three parts. First, the degree to which marriage prevents effects of neighborhood disorder on mastery and mental health will be examined. Second, the extent to which religious involvement prevents effects of

neighborhood disorder on sense of divine control and mental health will be examined. Third, the extent to which change in mastery and sense of divine control moderate the effects of neighborhood disorder on mental health will be examined.

More specifically, the theoretical rationale described above first suggested that marriage would prevent the effects of perceived neighborhood disorder on changes in mastery, which calls for a test of a statistical interaction. This interaction is tested using the equation:

$$\Delta\text{MAST} = a + b_1\text{MAST}_1 + b_2\text{PND} + b_3\text{MS} + b_4(\text{PND} \times \text{MS}) + \sum c_i Z_i + e$$

(1)

In this equation, ΔMAST and MAST_1 stand for change in mastery between wave 1 and 3 and wave 1 mastery, respectively; PND refers to perceived neighborhood disorder and MS stands for marital status.³⁰ The term involving PND x MS indicates the interaction between marital status and neighborhood disorder.³¹ The Z_i

³⁰ The set-up and description of these equations is largely based on examples provided by Krause (1998a) and (Krause 1998b), both in terms of the actual equations and the narrative description of the equations, as well as the way in which these equations are introduced. Any resemblance is gratefully acknowledged as stemming from the use of Dr. Krause's work as a model.

³¹ To guard against multicollinearity, within this dissertation continuous variables used in interactions are centered over their respective means prior to the creation of interaction terms (Aiken and West 1991).

in Equation 1 represents the control variables, a is the intercept, and b_i and c_i are regression coefficients. Equation 1 is estimated hierarchically. First, the “main effects” of the model are estimated by excluding the interaction term (PND x MS), which serves to demonstrate the effect of neighborhood disorder, independent of controls and baseline mastery, on change in mastery. Next, the model is re-estimated, this time including the interaction between marital status and neighborhood disorder (PND x MS). A significant t -value for b_4 indicates a significant interaction between neighborhood disorder and marital status.

Following these analyses, a second model is run in which a three-term interaction is included in the model between gender, neighborhood disorder, and marital status. This three-term interaction will test the extent to which the interaction between marital status and neighborhood disorder (PND x MS) varies by the respondent’s gender. Following standard procedure for testing three term interactions (Aiken and West 1991), all lower-order interactions (i.e., two-term interactions) which can be created using the variables involved in the three-term interaction will also be included in the model which tests this three-term interaction. This interaction is tested using the equation:

$$\Delta\text{MAST} = a + b_1\text{MAST}_1 + b_2\text{PND} + b_3\text{MS} + b_4\text{GEN} + b_5(\text{PND} \times \text{MS}) + b_6(\text{PND} \times \text{GEN}) + b_7(\text{MS} \times \text{GEN}) + b_8(\text{MS} \times \text{GEN}) + b_9(\text{PND} \times \text{MS} \times \text{GEN}) + \sum c_i Z_i + e \quad (2)$$

In this equation, GEN refers to a respondent’s gender. A significant t -value for b_9 indicates a significant three-term interaction between neighborhood disorder,

marital status, and gender. If this interaction is significant, model 2 will be recalculated, this time separately for men and women.

While the analyses described above examine the effects of neighborhood disorder on mastery, they do not indicate the extent to which neighborhood disorder affects mental health, nor whether marriage prevents these effects. More specifically, the theoretical rationale suggested that marital status would buffer the effects of neighborhood disorder on mental health, but that change in mastery would explain these buffering effects. These propositions are tested using the equation:

$$\Delta\text{DEPRESS} = a + \text{DEPRESS}_1 + b_2\text{PND} + b_3\text{MS} + b_4(\text{PND} \times \text{MS}) + b_5\text{MAST}_1 + b_6\Delta\text{MAST} + \sum c_i Z_i + e \quad (3)$$

Within this equation, the new terms not described in previous equations are $\Delta\text{DEPRESS}$, which refers to change in depression, and DEPRESS_1 , which refers to baseline depression. This equation will be estimated hierarchically. In the first step, the main effects of neighborhood disorder will be estimated, while in the second step the interaction between neighborhood disorder and mastery ($\text{PND} \times \text{MS}$) will be examined. If this interaction is significant, baseline mastery and change in mastery will be consecutively controlled to explore the degree to which differences in initial levels of mastery and differences in change in mastery explain the buffering power of marriage.

In addition, the degree to which the buffering power of marriage varies by gender will be analyzed using a three-term interaction in which gender is interacted

with neighborhood disorder and marital status, along with the appropriate lower-order interactions:

$$\Delta\text{DEPRESS} = a + \text{DEPRESS}_1 + b_2\text{PND} + b_3\text{MS} + b_4\text{GEN} + b_5(\text{PND} \times \text{MS}) + b_6(\text{PND} \times \text{GEN}) + b_8(\text{MS} \times \text{GEN}) + b_9(\text{PND} \times \text{MS} \times \text{GEN}) + \sum c_i Z_i + e \quad (4)$$

If this three-term interaction is significant, equation 3 will be re-run, this time separately for men and women. To test the buffering effects of marriage for change in anger, the analyses described for depression will be re-run, but this time with change in anger as the dependent variable, controlling for baseline anger.

The theoretical rationale then suggested that religious involvement would prevent the effects of neighborhood disorder on mental health by preventing effects on sense of divine control. These expectations are first tested by examining whether religious involvement protects elders' sense of divine control. Two equations are used. The first examines whether attendance at religious services prevents these effects, while the second examines whether prayer prevents these effects:

$$\Delta\text{DC} = a + b_1\text{DC}_1 + b_2\text{PND} + b_3\text{ATT} + b_4\text{PRAY} + b_5(\text{PND} \times \text{ATT}) + \sum c_i Z_i + e \quad (5)$$

$$\Delta\text{DC} = a + b_1\text{DC}_1 + b_2\text{PND} + b_3\text{ATT} + b_4\text{PRAY} + b_5(\text{PND} \times \text{PRAY}) + \sum c_i Z_i + e \quad (6)$$

Less attention will be devoted to these equations because of their similarity to equation 1. In place of mastery in equation 1, these equations examine baseline sense of divine control (DC_1) and change in sense of divine control (ΔDC). ATT refers to attendance at religious services, while PRAY refers to frequency of prayer. Equation 5 examines the interaction between perceived neighborhood disorder and attendance ($PND \times ATT$), while equation 6 examines the interaction between perceived neighborhood disorder and prayer ($PND \times PRAY$). Also similar to equation 1, these equations will be estimated hierarchically. First, the main effects of neighborhood disorder, independent of religious involvement and the controls, on change in neighborhood disorder will be tested, and, following this, the interaction indicated in equation 5 will be tested, after which the interaction in equation 6 will be tested.

Following these analyses, additional analyses will examine whether the moderating effects of attendance and prayer vary by level of education and race.

The form of these equations is:

$$\begin{aligned} \Delta DC = & a + b_1DC_1 + b_2PND + b_3ATT + b_4PRAY + b_5ED + b_6(PND \times ATT) \\ & + b_7(PND \times ED) + b_8(ATT \times ED) + b_9(PND \times ATT \times ED) + \sum c_i Z_i + e \end{aligned} \quad (7)$$

$$\begin{aligned} \Delta DC = & a + b_1DC_1 + b_2PND + b_3ATT + b_4PRAY + b_5ED + b_6(PND \times PRAY) \\ & + b_7(PND \times ED) + b_8(PRAY \times ED) + b_9(PND \times PRAY \times ED) + \sum c_i Z_i + e \end{aligned} \quad (8)$$

Equation 7 tests a three-term interaction between attendance, neighborhood disorder, and education, along with the necessary lower-order interactions.

Equation 8 tests a similar interaction, but this time involving an interaction between prayer, neighborhood disorder, and education. If the three-term interaction in equation 7 is significant, the analyses involving equation 5 will be re-run, this time separately for those with a high school degree or less and those with more than a high school degree.³² If the three-term interaction in equation 8 is significant, the

³² The decision on how to split the sample for stratified analyses based on education involved a number of factors. First, having education beyond a high school degree often indicates a level of proficiency and prestige that delineates individuals from those who obtained what is for the most part a basic credential in society in terms of a high school degree. Second, while analyzing those without a high school degree alone may have been useful, there were a little over a hundred people who had not received a high school degree in the reduced sample, so that the sample sizes involved in such a stratified analyses would be so disparate as to leave considerable question as to whether differences in significance between groups were due to differences in statistical power. Third, beyond high school, the remainder of the sample largely had at least some college education, indicating a relatively homogenous group, so that this division was relatively straightforward. While this did leave some debate as to which group to assign those with vocational education, it should be noted that this was a relatively small group of approximately forty people, and because these individuals had obtained education and credentials that

analyses involving equation 6 will be re-run, this time separately for those with a high school degree or less and those with more than a high school degree.

Following these analyses, two additional three-term interactions are tested, but this time with race examined as a moderator instead of education:

$$\begin{aligned} \Delta DC = & a + b_1DC_1 + b_2PND + b_3ATT + b_4PRAY + b_5RACE + b_6(PND \times ATT) \\ & + b_7(PND \times RACE) + b_8(ATT \times RACE) + b_9(PND \times ATT \times RACE) \\ & + \sum c_i Z_i + e \quad (9) \end{aligned}$$

$$\begin{aligned} \Delta DC = & a + b_1DC_1 + b_2PND + b_3ATT + b_4PRAY + b_5RACE + b_6(PND \times PRAY) \\ & + b_7(PND \times RACE) + b_8(PRAY \times RACE) + b_9(PND \times PRAY \times RACE) \\ & + \sum c_i Z_i + e \quad (10) \end{aligned}$$

If the three-term interaction in equation 9 is significant, the analyses involving equation 5 will be re-run, this time separately for African-Americans and whites. If the three-term interaction in equation 10 is significant, the analyses involving equation 6 will be re-run, this time separately for African-Americans and whites.

The theoretical rationale described above also suggested that religious involvement would buffer the effects of neighborhood disorder on mental health by protecting elders' sense of divine control. These propositions are tested using the equations:

likely allowed them to work in a skilled profession, it was more appropriate to group these individuals with those who had obtained education beyond high school.

$$\Delta\text{DEPRESS} = a + b_1\text{DEPRESS}_1 + b_2\text{PND} + b_3\text{ATT} + b_4\text{PRAY} + b_5(\text{PND} \times \text{ATT}) + b_6\text{DC}_1 + b_7\Delta\text{DC} + \sum c_i Z_i + e \quad (11)$$

$$\Delta\text{DEPRESS} = a + b_1\text{DEPRESS}_1 + b_2\text{PND} + b_3\text{ATT} + b_4\text{PRAY} + b_5(\text{PND} \times \text{PRAY}) + b_6\text{DC}_1 + b_7\Delta\text{DC} + \sum c_i Z_i + e \quad (12)$$

Similar to previous equations, these equations will be estimated hierarchically. In equation 11 the interaction between neighborhood disorder and attendance will first be tested (the main effects of neighborhood disorder on depression will have already been previously examined in equation 9). If this interaction is significant, baseline sense of divine control and change in sense of divine control will be consecutively controlled, to explore the degree to which differences in initial levels of sense of divine control and differences in change in sense of divine control explain the buffering power of attendance at religious services. This procedure will then be repeated according to equation 12, in which the buffering power of prayer will be tested, and, if the interaction is significant, baseline sense of divine control and change in sense of divine control will be consecutively controlled to explore the degree to which differences in initial levels of sense of divine control and differences in change in sense of divine control explain the buffering power of prayer.

In addition, the degree to which the buffering power of religious involvement vary by level of education and race will be analyzed using three-term

interactions. The first set of these equations will examine differences in these buffering effects by education:

$$\Delta\text{DEPRESS} = a + b_1\text{DEPRESS}_1 + b_2\text{PND} + b_3\text{ATT} + b_4\text{PRAY} + b_5\text{ED} + b_6(\text{PND} \times \text{ATT}) + b_7(\text{PND} \times \text{ED}) + b_8(\text{ATT} \times \text{ED}) + b_9(\text{PND} \times \text{ATT} \times \text{ED}) + \sum c_i Z_i + e$$

(13)

$$\Delta\text{DEPRESS} = a + b_1\text{DEPRESS}_1 + b_2\text{PND} + b_3\text{ATT} + b_4\text{PRAY} + b_5\text{ED} + b_6(\text{PND} \times \text{PRAY}) + b_7(\text{PND} \times \text{ED}) + b_8(\text{PRAY} \times \text{ED}) + b_9(\text{PND} \times \text{PRAY} \times \text{ED}) + \sum c_i Z_i + e$$

(14)

If the three-term interaction in equation 13 is significant, the analyses involving equation 11 will be re-run, this time separately for those with a high school degree or less and those with more than a high school degree. Similarly, if the three-term interaction in equation 14 is significant, the analyses involving equation 12 will be re-run, this time separately for those with a high school degree or less and those with more than a high school degree. To test whether the buffering effects of religious involvement vary by race, equations 13 and 14 will be recalculated, but this time with race substituted for education. If the three-term interaction involving attendance is significant, equation 13 will be re-run separately for African-Americans and whites, and, if the three-term interaction involving prayer is significant, equation 14 will be re-run separately for African-Americans and whites. To test the buffering effects of religious involvement for change in anger, the

analyses described for depression will be re-run, but this time with change in anger as the dependent variable, controlling for baseline anger.

It should also be recalled that the third research question described above lead to the expectation that, independent of marriage and religious involvement, change in mastery and divine control would moderate the effects of neighborhood disorder on mental health. For change in mastery, this expectation will be tested with the equation:

$$\Delta\text{DEPRESS} = a + b_1\text{DEPRESS}_1 + b_2\text{PND} + b_3\text{MAST}_1 + b_4\Delta\text{MAST} + b_5(\text{PND} \times \Delta\text{MAST}) + \sum c_i Z_i + e \quad (15)$$

Equation 15 examines the degree to which changes in mastery moderate the effects of change in mastery on depression, with a significant *t*-value for b_5 indicating a significant moderating effect.

It was also suggested that these moderating effects may vary by race, class, and gender. The equation which tests whether this moderation varies by gender is:

$$\Delta\text{DEPRESS} = a + b_1\text{DEPRESS}_1 + b_2\text{PND} + b_3\text{MAST}_1 + b_4\Delta\text{MAST} + b_5\text{GEN} + b_6(\text{PND} \times \Delta\text{MAST}) + b_7(\text{PND} \times \text{GEN}) + b_8(\text{PND} \times \Delta\text{MAST}) + b_9(\text{PND} \times \Delta\text{MAST} \times \text{GEN}) + \sum c_i Z_i + e \quad (16)$$

If the three-term interaction in equation 16 significant, the analyses involving equation 15 will be re-run, this time separately for men and women. To test

whether the moderating effects of change in mastery vary by race, the analyses involving equation 16 will be re-run, but this time with race substituted for gender. Analyses using model 15, but stratified by race, will then be run if there is a significant three-term interaction involving race. Similarly, to test whether the moderating effects of change in mastery vary by education, the analysis involving equation 16 will be re-run, but this time with education substituted for gender. Analyses using model 15, but stratified by high and low levels of education (high school degree or less versus more than high school degree) will then be run if there is a significant three-term interaction involving education. For change in anger, all analyses will be re-run, but this time with change in anger as the dependent variable, and baseline anger included as a predictor instead of baseline depression.

For analyses involving change in divine control as a moderator, an equation similar to equation 15 will be used, but this time with change in divine control substituted for change in mastery:

$$\Delta\text{DEPRESS} = a + b_1\text{DEPRESS}_1 + b_2\text{PND} + b_3\text{DC}_1 + b_4\Delta\text{DC} + b_5(\text{PND} \times \Delta\text{DC}) + \sum c_i Z_i + e \quad (17)$$

Because this equation is nearly identical to equation 15, less attention will be devoted to its description, except to state that equation 17 examines whether change in sense of divine control moderates the effects of neighborhood disorder on depression.

The theoretical rationale described above also suggested that the buffering effects of sense of divine control may vary by gender, race, and SES. The form of the equations used to test these expectations are essentially the same as equation 16, but this time with baseline sense of divine control and change in sense of divine control replacing baseline mastery and change in mastery.

$$\Delta\text{DEPRESS} = a + b_1\text{DEPRESS}_1 + b_2\text{PND} + b_3\text{DC}_1 + b_4\Delta\text{DC} + b_5\text{GEN} + b_6(\text{PND} \times \Delta\text{DC}) + b_7(\text{PND} \times \text{GEN}) + b_8(\text{PND} \times \Delta\text{DC}) + b_9(\text{PND} \times \Delta\text{DC} \times \text{GEN}) + \sum c_i Z_i + e \quad (18)$$

Since the form of this equation is similar to equation 16, less attention will be given to its description, except to note that equation 18 examines whether the moderating effects of change in sense of divine control vary by gender. If this three-term interaction is significant, the analyses represented by equation 17 will be re-run, this time separately for men and women. Race will then be substituted for gender in equation 18 to test whether these moderating effects vary by race, and a significant three-term interaction for this models will be followed by an analyses represented in equation 17, this time separately for African-Americans and whites. In addition, analyses represented by equation 18 will be re-run, but this time with education substituted for gender; if this three-term interaction is significant, the analyses represented by equation 17 will be re-run separately for elders at higher and lower levels of education. For change in anger, all analyses involving change in sense of divine control as a moderator will be re-run, but this time with change in anger as

the dependent variable, and baseline anger included as a predictor instead of baseline depression.

CHAPTER 4: ANALYSES

Part I: Does Marriage Protect Mental Health from the Effects of Neighborhood Disorder by Protecting Mastery?

In the first set of analyses, I examine whether marriage protects elders' mastery from the effects of perceived neighborhood disorder. I then examine whether marriage buffers the effects of neighborhood disorder on elders' mental health, as well as whether the protection of mastery helps explain how marriage provides these buffering effects.

Does Marriage Protect Mastery and Are There Gender Differences in This Protection?

Table 2 examines the relationship between perceptions of neighborhood disorder and change in mastery between wave 1 and wave 3. Model 1 in Table 2 shows the relationship between neighborhood disorder and changes in mastery, net of the effects of marital status and control variables. This model indicates that perceptions of neighborhood disorder at time 1 are *not* significantly negatively related to changes in mastery, and gender was also not related to changes in mastery. This does not indicate, however, the extent to which effects of neighborhood disorder on changes in mastery may differ by marriage, nor whether this moderation varies by gender. Model 2 interacts neighborhood disorder with marriage to examine whether the relationship between perceived neighborhood disorder and changes in mastery varies by marital status. This interaction is

significant, indicating that the relationship between perceptions of neighborhood disorder and changes in mastery differs by marital status. The meaning of this interaction is demonstrated in Table 3, which re-runs Model 1, but separately for the married and non-married. As can be seen here, perceived neighborhood disorder is significantly and negatively related to changes in mastery for the non-married, but is not significantly related to these changes for the married. Therefore, perceived neighborhood disorder does seem to result in decreases in mastery, but only for the non-married. Marriage protects elders from the harmful effects of neighborhood disorder on mastery.

While it appears that marriage does indeed moderate the effects of neighborhood disorder on mastery, this does not indicate the extent to which this moderation may vary by gender. Model 3 in Table 2 therefore includes a three-term interaction between gender, perceived neighborhood disorder, and marital status. This three-term interaction is non-significant, indicating that while marriage may have moderated the effects of neighborhood disorder on mastery, marriage provided relatively similar moderation for men and women.³³

³³ Supplementary analyses indicated that the moderating effects of marriage for change in mastery did not vary by race or education. Additional supplementary analyses showed that neither attendance nor prayer buffered the effects of neighborhood disorder on mastery, and these effects did not vary by race, gender, or level of education.

Does Marriage Protect Mental Health, Are There Gender Differences in This Protection, and Does Mastery Explain These Protective Effects?

Depression. Table 4 examines the relationship between perceptions of neighborhood disorder and changes in depression between wave 1 and wave 3. Model 1, the main effects model, shows that independent of controls, perceptions of neighborhood disorder are significantly related to increases in depression over the course of the study. However, neither marriage nor gender are significantly related to changes in depression. Model 2 interacts marriage and perceived neighborhood disorder to examine whether the relationship between perceived neighborhood disorder and changes in depression varies by marriage. Model 2 indicates a significant interaction between neighborhood disorder and marital status. The meaning of this interaction is made clear in Figure 2, in which the adjusted means for change in depression based on Model 2 are presented. Here, it can be seen that, for the non-married, greater levels of neighborhood disorder at wave 1 are related to greater increases in depression over the course of the study; for the married, though, this slope of this line is relatively flat, indicating little effect of neighborhood disorder on changes in depression over the course of the study. Thus, these analyses indicate that marriage buffers the relationship between neighborhood disorder and depression.

However, this does not indicate the extent to which the buffering effects of marriage may vary by gender. To examine this question, Model 3 interacts neighborhood disorder, marriage, and gender. However, this interaction is non-significant. Therefore, the protective effects of marriage for changes in depression

are similar for men and women. Because of this, the three-term interaction is removed from subsequent models which examine the extent to which mastery explains the buffering of marriage for depression.³⁴

Following these analyses, a series of controls are entered into models in Table 4 to examine the extent to which mastery explains the buffering effects of marriage. In Model 4, baseline mastery is included in the model, and the beta coefficient for the interaction between marital status and neighborhood disorder changes very little in size or significance from Model 2. However, when change in mastery is included as a predictor along with baseline mastery in Model 5, change in mastery is significantly related to change in depression, and the direction of this coefficient is negative. This indicates that change in mastery is inversely related to change in depression, so that increases in mastery are related to decreases in depression, and decreases in mastery are related to increases in depression. Since change in mastery is measured in terms of time 1 mastery minus time 3, the variable for change in mastery can be interpreted in the same metric as mastery, so that a score of -1 indicates a one-unit drop in mastery, while a score of 1 indicates a one-unit increase in mastery over the course of the study. With this in mind, we can interpret the coefficient of -.220 for change in mastery to indicate that, when people experienced a drop in mastery of one unit between wave 1 and wave 3, they

³⁴ Supplementary analyses indicated that the buffering effects marriage for change in depression did not vary by race or education level. In addition, analyses which re-ran Model 1 separately for the married and non-married showed that the main effect of neighborhood disorder was significant only for the non-married.

experienced an increase in depression of .220. It should of course also be noted that some individuals experienced an increase in mastery over the course of the study, and this coefficient indicates that people who experienced a one-unit increase in mastery experienced a one-unit decrease in depression.

Furthermore, that decreases in mastery are related to increases in depression is critical for understanding the effects of neighborhood disorder on mental health, not only because neighborhood disorder is related to decreases in mastery, but also because the interaction between marital status and neighborhood disorder is reduced to non-significance when change in mastery is controlled. This indicates that the buffering effects of marriage are not due to advantages in mastery the married began the study with, and these buffering effects are specifically because the married were less likely than the non-married to experience a decrease in mastery due to perceptions of neighborhood disorder. By protecting elders' sense of mastery from the harmful effects of perceived neighborhood disorder, marriage protected elders' levels of depression, and these protective effects were similar for men and women.

Anger. Table 5 examines the relationship between perceptions of neighborhood disorder and changes in anger between wave 1 and wave 3. Model 1, the main effects model, shows that independent of controls, perceptions of neighborhood disorder are significantly related to increases in anger over the course of the study. This does not indicate, however, the extent to which effects of neighborhood disorder on changes in anger may differ by marriage, nor whether this moderation varies by gender. Model 2 interacts marriage and perceived neighborhood disorder to examine whether the relationship between perceived

neighborhood disorder and changes in anger varies by marital status. Model 2 indicates a significant interaction between neighborhood disorder and marital status. The meaning of this interaction is made clear in Figure 3, in which the adjusted means for change in anger based on Model 2 are presented. Here, it can be seen that, for the non-married, greater levels of neighborhood disorder at wave 1 are related to increases in anger over the course of the study, but for the married these increases do not occur. Thus, marriage buffered the effects of neighborhood disorder on increases on anger.

However, this does not indicate the extent to which the buffering effects of marriage may vary by gender. To examine this question, Model 3 interacts neighborhood disorder, marriage, and gender. However, this interaction is non-significant. Therefore, there is little difference between men and women in the degree to which marriage protects elders from the effects of neighborhood disorder on anger. Because of this, the three-term interaction is removed from subsequent models which examine whether mastery can explain these buffering effects.³⁵

Following these analyses, a series of controls are entered into models to examine the extent to which mastery explains the buffering effects of marriage. In Model 4, baseline mastery is included in the model, and, while baseline mastery is a significant predictor of anger, the beta coefficient for the interaction between marital

³⁵ Supplementary analyses indicated that the buffering effects marriage for change in anger did not vary by race or level of education. In addition, analyses which re-ran Model 1 separately for the married and non-married showed that the main effect of neighborhood disorder was significant only for the non-married.

status and neighborhood disorder changes very little in size or significance from Model 2. This indicates that the buffering effects of marriage are not due to initial advantages of the married in mastery. When change in mastery is also included as a predictor along with baseline mastery in Model 5, change in mastery is also significantly related to change in anger, and the direction of this coefficient again indicates an inverse relationship between change in mastery and mental health. Thus, increases in mastery are related to decreases in anger, but decreases in mastery are related to increases in anger, and the effects of decreases in mastery are especially critical because, for the non-married, neighborhood disorder is related to losses in mastery. In addition, when change in mastery is controlled in model 5, the interaction between marital status and neighborhood disorder is reduced in significance from $p < .01$ to $p < .05$. This indicates that the protective effects marriage provides for mastery only *partially* explain these buffering effects, suggesting that additional mechanisms may also contribute to an explanation of these buffering effects.

Overall, then, marriage prevented the negative effects of neighborhood disorder on mastery. Furthermore, marriage buffered the effects of perceived neighborhood disorder on both internalizing and externalizing symptoms, and change in mastery explained this buffering for internalizing symptoms, but change in mastery explained only part of these effects for externalizing symptoms. Hence, the protective effect that marriage provided for mastery helps explain how marriage protected elders' mental health. However, it is not clear why this explanation was more complete for depression than anger. In part, this is likely because the

buffering effect of marriage was stronger for anger than depression, so there was more variance which needed to be explained for the buffering of change in anger. Why marriage may have had a stronger buffering effect for anger than depression, and what mechanisms beyond mastery may explain this buffering effect, will be addressed in the discussion section.

Part II: Does Religious Involvement Protect Mental Health from the Effects of Neighborhood Disorder by Protecting Sense of Divine Control?

In the second set of analyses in this dissertation, I examine whether religious activities protect elders' sense of divine control from the effects of perceived neighborhood disorder. I then examine whether religious involvement buffers the effects of neighborhood disorder on elders' mental health, as well as whether the protection of sense of divine control helps explain how religious involvement provides these buffering effects.

Does Religious Involvement Protect Sense of Divine Control and Are There Race and SES Differences in This Protection?

Table 6 examines the relationship between perceptions of neighborhood disorder and change in sense of divine control between wave 1 and wave 3. Model 1, the main effects model, shows that independent of controls, neighborhood disorder is not significantly related to changes in sense of divine control. However, this does not indicate the extent to which effects of neighborhood disorder on changes in sense of divine control may differ by religious involvement, nor whether

this moderation varies by education or race. Model 2 interacts attendance at religious services and perceived neighborhood disorder, to examine whether the relationship between perceived neighborhood disorder and changes in sense of divine control varies by attendance. Model 3 interacts frequency of prayer and perceived neighborhood disorder, to examine whether the relationship between perceived neighborhood disorder and changes in sense of divine control varies by prayer. Neither of these interactions is significant.

While it may appear from these analyses that the effects of perceived neighborhood disorder on changes in sense of divine control do not differ by religious involvement, this still leaves open the question of whether the power of religious involvement to moderate the effects of neighborhood disorder varies by race or level of education. Table 7 examines whether the moderating effects of attendance and prayer vary by education and race through the use of three-term interactions. In Panel A of Table 7, Model 1 interacts neighborhood disorder, attendance, and education, while Model 2 substitutes prayer for attendance. Model 1 indicates that there is a significant three-term interaction between education, neighborhood disorder, and attendance, but Model 2 indicates that the three term interaction between education, neighborhood disorder, and prayer is not significant. In panel B of Table 7, Model 1 examines the extent to which race conditions the moderating effects of attendance through the use of a three-term interaction involving race, attendance, and neighborhood disorder, while Model 2 substitutes prayer for attendance, thereby examining the extent to which race conditions the moderating effects of prayer. Neither three-term interaction is significant.

Therefore, it appears that education does condition the degree to which religious involvement moderates the effects of neighborhood disorder on changes in sense of divine control, but the role of education in this moderation is limited to frequency of attendance at religious services. However, race does not condition the moderating effects of either attendance or prayer.³⁶

Table 8 helps interpret this significant three-term interaction. In Table 8, the sample is split into two groups—those with lower levels of education, in terms of a high school diploma or less, and those with greater levels of education, those with more than a high school diploma. The first model tests a two-term interaction between attendance and neighborhood disorder for those with lower levels of education, while the second model tests this interaction for those with greater levels of education, and this interaction is significant only for those with greater levels of education. This suggests that attendance does indeed moderate the effects of neighborhood disorder, but only for individuals at higher levels of SES. The meaning of this interaction is illustrated in Figure 4, which depicts the adjusted means for changes in sense of divine control based on Model 2 in Table 8. Here it can be seen that for elders who never attend religious services, greater levels of perceived neighborhood disorder are related to greater decreases in sense of divine

³⁶ Supplementary analyses indicated that the moderating effects of attendance and prayer for changes in sense of divine control did not vary by gender. Additional supplementary analyses showed that marriage did not buffer the effects of neighborhood disorder on sense of divine control, and these effects did not vary by race, gender, or level of education.

control, while for elders who attend religious services regularly (1 to 2 times a week), there was little effect of neighborhood disorder on sense of divine control.

These analyses therefore indicate that level of attendance at religious services did not impact the degree to which neighborhood disorder affected the sense of divine control for those who were low in educational attainment, but attendance did moderate these effects for those who were at high levels of education. A large degree of public involvement in religion, as indicated by frequent attendance at religious services, was necessary to prevent a decrease in sense of divine control for those with a high degree of educational attainment, but neighborhood disorder had little effect on the sense of divine control for those at low levels of education, regardless of their levels of attendance at religious services. This helps support the idea that, because a sense of divine control may be more central in the lives of individuals with lower levels of SES, the sense of divine control of these elders may be more stable and less in need of bolstering when faced with reality-threatening social conditions. As a result, it was the sense of divine control of elders at higher levels of education which was more susceptible to neighborhood conditions, so that religious involvement was needed to support elders' sense of divine control only for elders at higher levels of education. However, prayer provided no protective effects. This might have been because the added social dimension of religious attendance helped provide greater salience for the religious identity, and also provided more social support for individuals' sense of divine control through religious-related social support. The difference in

moderating effects between attendance and prayer will be addressed further in the discussion section.

Does Religious Involvement Protect Mental Health, Are There Race and SES Differences in This Protection, and Does Sense of Divine Control Explain These Protective Effects?

Depression. Table 9 examines the relationship between perceptions of neighborhood disorder and changes in depression between wave 1 and wave 3. Model 1, the main effects model, replicates Model 1 from Table 7, and again shows that independent of controls, perceptions of neighborhood disorder are significantly related to increases in depression over the course of the study. This does not indicate, however, the extent to which effects of neighborhood disorder on changes in depression may differ by religious involvement, nor whether this moderation varies by education or race. Model 2 interacts attendance at religious services and perceived neighborhood disorder to examine whether the relationship between perceived neighborhood disorder and changes in depression varies by attendance. Model 3 interacts frequency of prayer and perceived neighborhood disorder to examine whether the relationship between perceived neighborhood disorder and changes in depression varies by prayer. Neither of these interactions is significant.³⁷

³⁷ The direct effects of divine control on mental health were not the central concern of this dissertation, and were instead examined only as explanatory mechanisms for buffering effects of attendance at religious services and prayer. Hence, since neither

While it may appear from these analyses that the effects of perceived neighborhood disorder on changes in depression do not differ by religious involvement, this still leaves open the question of whether the power of religious involvement to buffer the effects of neighborhood disorder on depression varies by race or level of education. Table 10 examines whether the buffering effects of attendance and prayer vary by education and race through the use of three-term interactions. In Panel A of Table 10, Model 1 interacts neighborhood disorder, attendance, and education, while Model 2 substitutes prayer for attendance. In Panel B of Table 10, Model 1 examines the extent to which race conditions the buffering effects of attendance through the use of a three-term interaction involving race, attendance, and neighborhood disorder, while Model 2 substitutes prayer for attendance, thereby examining the extent to which race conditions the buffering effects of prayer. None of these three-term interactions is significant.³⁸ Therefore, despite the results indicating that attendance at religious services prevented effects of neighborhood disorder on changes in sense of divine control for those who were

measure of religious involvement provided a buffering effect, neither baseline sense of divine control nor change in sense of divine control is included in models which examine buffering effects of religious involvement. However, in ancillary analyses not shown here, the effects of both baseline and change in sense of divine control on both anger and depression were examined, and neither baseline nor change in sense of divine control had a significant effect on either measure of mental health.

³⁸ Supplementary analyses indicated that the buffering effects of attendance and prayer for change in depression did not vary by gender.

high in education, neither attendance nor prayer buffered the effects of neighborhood disorder on depression, and this lack of significance was *not* because these buffering effects were restricted to elders of a certain race or SES .

Anger. Table 11 examines the relationship between perceptions of neighborhood disorder and changes in anger between wave 1 and wave 3. Model 1, the main effects model, replicates Model 1 from Table 8, and again shows that independent of controls, perceptions of neighborhood disorder are significantly related to increases in anger over the course of the study. Subsequent analyses essentially replicated the lack of significant interactions between religious involvement and neighborhood disorder which were found for depression, so less attention will be devoted to describing these interactions. Models 2 and 3 indicate that neither attendance nor prayer respectively buffered the effects of neighborhood disorder on anger. In Panel A of Table 12, Model 1 indicates that the buffering effect of attendance did not vary by education, while Model 2 indicates that the buffering effect of prayer did not vary by education. Furthermore, in Panel B of Table 12, Models 1 and 2 indicate that the buffering effects of attendance and prayer also do not vary by race.³⁹

Overall, these analyses indicated that attendance at religious services did protect elders' sense of divine control, but only for elders at higher levels of SES. This is in part because neighborhood disorder had little effect on the sense of divine control of elders at low levels of SES, so that only elders at higher levels of SES

³⁹ Supplementary analyses indicated that the buffering effects of attendance and prayer for change in anger did not vary by gender.

needed the support of involvement in the religious institution. However, these protective effects did not appear to convey any mental health benefits. Neither religious attendance nor prayer protected individuals from the mental health effects of neighborhood disorder. This is rather surprising given previous research on the relationship between religious involvement and mental health, and the discussion section will address this lack of buffering further.

However, that marriage prevented effects of neighborhood disorder on mental health by protecting a sense of mastery, and religious involvement protected sense of divine control from the effects of neighborhood disorder, begs the question of whether changes in these two aspects of the self moderate the effects of neighborhood disorder on mental health in a process of “structural amplification.” In the context of institutional involvement, this question is important because, if decreases in these psychological resources exacerbate the effects of neighborhood disorder, and these decreases are prevented through institutional involvement, this may be an additional way neighborhood disorder affects elders’ mental health differently based on their level of institutional involvement. The extent to which changes in these two aspects of the self moderate the mental health effects of neighborhood disorder will be examined in the next section.

Part III: Does Loss of Mastery and Sense of Divine Control Exacerbate the Effects of Neighborhood Disorder on Mental Health?

The third set of analyses in this dissertation examine the way in which change in mastery and sense of divine control moderate the effects of neighborhood

disorder on mental health. Special attention is given to the way in which losses in these components of the self may amplify the effects of neighborhood disorder, because, if these amplifying effects occur, this would indicate an additional way that, by protecting these self, institutional involvement protects elders from the mental health effects of neighborhood disorder.

Does Change in Mastery Moderate the Effects of Neighborhood Disorder on Mental Health and Does This Moderation Vary by Gender, Race, and SES?

Depression. Table 13 examines whether change in change in mastery moderates the relationship between neighborhood disorder and change in depression. This model indicates that the interaction between neighborhood disorder and *change* in mastery is significant. Therefore, it appears that the degree to which neighborhood disorder affects depression varies by changes across the study in elders' mastery.

However, before examining the meaning of this interaction in more detail, we should first examine the extent to which these moderating effects may vary by race, class, and gender. This question is examined in Table 14. Panel A of Table 14 examines whether the moderating effects of change in mastery vary by gender, and this three-term interaction is significant. Therefore, while it appeared in Table 13 that changes in mastery moderated the effects of neighborhood disorder, these additional analyses indicate that the degree to which changes in mastery moderate the effects of perceived neighborhood disorder on depression vary by gender.

Analyses in Table 15 help to indicate the meaning of these three-term interactions. Analyses in this table split the sample between men and women and test an interaction between perceived neighborhood disorder and change in mastery. Model 1 in Table 15 indicates that the interaction between neighborhood disorder and change in mastery is *not* significant for men, but Model 2 indicates that this interaction *is* significant for women. In addition, it does not appear that the selectivity of these buffering effects is because neighborhood disorder affects depression only for women; ancillary analyses not shown here indicate that the effects of neighborhood disorder on depression did not vary by gender. Therefore, neighborhood disorder affects the depression of men in a similar manner as it does for women, but changes in mastery moderate these effects only for women. This supports the idea that, for men, initial levels of mastery were high enough that decreases in mastery would not necessarily expose them to increased risk of depression due to neighborhood disorder, but initial levels of mastery would be lower for women, so that for women decreases in mastery would lead to greater exposure to psychological distress due to neighborhood disorder.

The meaning of this interaction is made clear in Figure 5. The creation of this interaction is guided by previous research on structural amplification (Ross et al. 2001), which examined the effects of neighborhood disorder at mean levels of powerlessness, as well as one standard deviation below and one standard deviation above the mean. For this research, this approach is especially apropos because mean change in mastery was essentially little change, so that graphing three-levels of change in mastery—one standard deviation above the mean for change in

mastery, the mean for change in mastery, and one standard deviation below the mean for change in mastery —allows us to examine the effects of neighborhood disorder at notable increases in mastery, little change in mastery, and notable decreases in mastery. This approach is useful because it helps us specify whether it is specifically increases in mastery which amplify the effects of neighborhood disorder or whether these interactions are more indicative of buffering effects due to increases in mastery, as well as whether little change in mastery amplifies or has little effect on the relationship between neighborhood disorder and mental health.⁴⁰ Figure 5 shows that neighborhood disorder resulted in increases in depression only when women in the sample *lost* mastery, and that neighborhood disorder resulted in little change in depression when older women retained mastery. Somewhat surprisingly, there was an association between neighborhood disorder and *decreases* in depression when women gained mastery, most likely because these increases in mastery help offset previously detrimental effects of living in a disordered

⁴⁰ It should also be remembered that mastery is a continuous variable, and there are actually a range of effects of neighborhood disorder at a variety of levels of change of mastery. The slopes within these figures therefore do not refer to firmly delineated categories of change in mastery, and are meant for illustrative purposes. Therefore, since there are a range of degrees of change in mastery that could be examined, including greater levels of change than those examined here, testing the significance of the specific slopes examined within these figures is not as important as using these figures to understand the differences in the effects of perceived disorder as changes in mastery vary.

neighborhood. However, the primary result of interest here is that decreases in mastery among women in the sample led to greater effects of neighborhood disorder on depression. This is of primary interest because neighborhood disorder is associated with decreases in mastery among the non-married. Therefore, these results suggest that non-married older women may be especially at risk of increases in depression due to neighborhood disorder because neighborhood disorder both leads to increases in the depression of non-married elders through the loss of mastery *and* because this loss of mastery *amplifies* the effects of neighborhood disorder on depression for older women.

Returning to Table 14, Panel B examines whether the moderating effects of changes in mastery vary by education, and the three-term interaction in this model is significant. Therefore, these analyses indicate that, independently of gender and race, the moderating power of change in mastery *also* varies by education.

Analyses in Table 16 help to indicate the meaning of this three-term interaction. These analyses test an interaction between neighborhood disorder and change in mastery separately for those at lower levels of education (high school degree or less) and those at greater levels of education (more than a high school degree). Model 1 indicates that the interaction is significant for elders at lower levels of education, but Model 2 indicates that this interaction is *not* significant for elders at higher levels of education. Furthermore, ancillary analyses indicated that this is *not* because neighborhood disorder affected the depression of only those with lower levels of education; an interaction between neighborhood disorder and education was not significant. Therefore, change in mastery did not impact the

effect of neighborhood disorder on depression for elders who had a high level of education, but change in mastery did buffer these effects for elders who were low in educational attainment. This supports the idea that, for elders with greater levels of SES, initial levels of mastery were high enough that decreases in mastery would not necessarily expose them to increased risk from neighborhood disorder, but initial levels of mastery would be lower for those at lower levels of SES, so that decreases in mastery would lead to much more substantial exposure to psychological distress due to neighborhood disorder.

Figure 6 helps describe the meaning of the significant interaction in Table 16. Figure 6, which was calculated in a manner similar to Figure 5, examines elders at low levels of education and indicates that, similar to the results for women, perceptions of neighborhood disorder were associated with increases in depression when elders lost mastery, and neighborhood disorder had little effect when there was little change in elders' mastery. However, when elders at low levels of education experienced an increase in mastery, neighborhood disorder was actually associated with a decrease in depression, most likely because this increase offset some of the previous negative effects of neighborhood disorder. Again, though, the primary finding of interest is that decreases in mastery were associated with greater effects of neighborhood disorder on depression. This is of primary interest because neighborhood disorder was shown to be related to decreases in mastery, but only for the non-married. Hence, these analyses suggest that older adults who are low in education *and* non-married may be especially at risk for depression due to neighborhood disorder, both because neighborhood disorder leads to greater levels

of depression for unmarried elders by reducing mastery *and* because decreases in mastery amplify the effects of neighborhood disorder on depression for elders at lower levels of educational attainment.

However, Table 14 indicates that three term interaction involving race, neighborhood disorder and change in mastery (Panel C) is not significant, indicating that race does not moderate the moderating effect of change in mastery. Therefore while the ramifications of structural amplification for depression may depend on marital status, gender, and SES, they do not appear to depend on race.

Anger. Table 17 examines whether change in mastery moderates the relationship between neighborhood disorder and change in anger. This model indicates that the interaction between neighborhood disorder and change in mastery is non-significant. Therefore, it appears that the effects of neighborhood disorder on changes in anger do not vary by changes in mastery over the course of the study.

However, this does not indicate the degree to which these moderating effects may vary by race, class and gender. This question is examined in Table 18. Panel A of Table 18 examines whether the moderating effects of change in mastery vary by gender, and this interaction is not significant. Therefore, the moderating effects of change in mastery do not vary by gender. However, Panel B of Table 18 examines whether the moderating effects of change in mastery vary by educational status and this interaction is significant. Therefore, these analyses suggest that changes in mastery do moderate the effects of neighborhood disorder on anger, but they do so selectively, based on elders' educational status.

Analyses in Table 19 help to indicate the meaning of this three-term interaction. These analyses test an interaction between neighborhood disorder and change in mastery separately for those at lower levels of education (high school degree or less) and those at greater levels of education (more than a high school degree). Model 1 indicates that the interaction is significant for elders at lower levels of education, but is *not* significant for elders at higher levels of education. Therefore, change in mastery did moderate the effects of neighborhood disorder on change in anger, but only for elders at lower levels of education. Furthermore, Figure 7, which was created in a manner similar to Figures 5 and 6, indicates the same general pattern as with previous interactions involving change in mastery, but with some differences. Here neighborhood disorder is related to increases in anger when elders lost mastery *or* when their mastery stayed relatively constant, but these effects were stronger when elders lost mastery, demonstrating how losses in mastery amplified the effects of neighborhood disorder on anger. However, neighborhood disorder was relatively unrelated to changes in anger when elders experienced increases in mastery, suggesting that increases in perceived control over one's life helped buffer the effects of neighborhood disorder on anger.

Again, though, the main finding of interest is that, for elders with low levels of education, decreases in mastery amplified the effects of neighborhood disorder on anger. This is of interest because it indicates that unmarried elders who are low in SES may especially be at risk for increases in anger, because perceived neighborhood disorder not only is more likely to lead to increases in anger for unmarried elders by reducing mastery, but these decreases in mastery also *amplify*

the effects of perceived disorder on anger for elders who are low in SES. Furthermore, since a similar effect was found for depression, these results suggest that elders at low levels of SES may especially be at risk for the mental health effects of neighborhood disorder because they are at risk for multiple types of psychological distress due to structural amplification.

Returning to Table 18, Panel C examines the extent to which the moderating effects of change in mastery vary by race, and the three-term interaction in this model is not significant. Hence, these analyses indicate that the effects of neighborhood disorder on elders' anger may vary by changes in mastery, and this moderation in turn varies by level of education, but not race or gender.

Overall, then, change in mastery did moderate the effects of neighborhood disorder on psychological distress, but these moderating effects were provided only for those who were in lower structural power conditions—women and individuals at lower levels of SES. Most likely, this is because women and elders at lower levels of education possessed fewer alternative coping resources and were lower in initial levels of mastery, so that losses in mastery were likely to leave these elders feeling much more vulnerable to neighborhood disorder than men or elders at higher levels of education who lost an equivalent degree of mastery. However, it is not clear why these effects were also not demonstrated for racial minorities, especially since African-Americans were also significantly lower than whites in baseline levels of mastery, and this will be addressed further in the discussion section.

Does Change in Sense of Divine Control Moderate the Effects of Neighborhood Disorder on Mental Health and Does This Moderation Vary by Gender, Race, and SES?

Depression. Table 20 examines whether change in sense of divine control moderates the relationship between neighborhood disorder and change depression. This interaction is not significant, so that it appears that the effects of neighborhood disorder on changes in depression do not vary by change in sense of divine control.

However, these analyses do not indicate the degree to which these buffering effects may vary by race, class and gender. This question is examined in Table 21. Panel A in Table 21 examines whether the moderating effects of change in sense of divine control vary by gender, and this interaction is not significant. Furthermore, in Panel B, the three-term interaction which interacts change in sense of divine control, education, and neighborhood disorder is also not significant, while Panel C tests a three-term interaction between race, change in sense of divine control, and neighborhood disorder, and this interaction is also non-significant. Therefore, change in sense of divine control did not moderate the effects of perceived neighborhood disorder on depression, and this moderation also did not vary by race, gender, or level of education.

Anger. Table 22 examines whether change in sense of divine control moderates the relationship between neighborhood disorder and change anger, and the interaction between neighborhood disorder and change in sense of divine control

is not significant. Therefore, it appears that the effects of neighborhood disorder on anger do not vary change in sense of divine control.

However, these analyses do not indicate the degree to which these buffering effects may vary by race, class and gender. This question is examined in Table 23. Panel A of examines whether the moderating effects of change sense of divine control vary by gender, and this interaction is not significant. Therefore, these analyses indicate that degree to which change in sense of divine control moderates the effects of neighborhood disorder on anger does not vary by gender. In addition, in Panel B, a three-term interaction involving education, rather than gender, is also not significant, indicating that the this moderation also does not vary by level of education. Furthermore, in Panel C, the three-term interaction which replaces education with race is also not significant. Therefore, these analyses indicated that change sense of divine control does not moderate the effects of neighborhood disorder on anger, and this moderation also is not selective by race, gender, or level of education.

Hence, loss of sense of divine control did not moderate the effects of neighborhood disorder for either mental health outcome examined in this research, and this moderation also did not depend on race, gender, or level of education. This is somewhat surprising, given that that people may find a sense of safety in a higher power, as well as the evidence indicating the effects of religious doubts on mental health. The implications of these lack of significant findings will be addressed in the discussion section.

Summary of Results

Overall, in respect to the first research question, marriage prevents the effects of neighborhood disorder on mental health by protecting mastery, but there are no gender differences in either protective effect. In regards to the second research question, neighborhood disorder is not related to decreases in sense of divine control for individuals who are low in education, but perceived neighborhood disorder is related to decreases in sense of divine control for individuals have higher levels of educational attainment, although a high level of religious attendance prevents these effects. However, neither religious attendance nor prayer buffer the effects of neighborhood disorder on mental health, and this buffering is not conditioned on race or level of education. Therefore, despite the protection religious attendance provides for sense of divine control, this protection does not translate into mental health benefits. Finally, in regards to the third research question, loss of mastery amplifies the effects of neighborhood disorder on depression, but only for women and elders with lower levels of education. Losses in mastery also amplify the effects of neighborhood disorder on anger, but only for elders with lower levels of education. Loss of sense of divine control does not moderate the mental health effects of neighborhood disorder, and this moderation does not vary by race, gender, or level of education.

CHAPTER 5. DISCUSSION

Research shows that neighborhood conditions can have deleterious effects on the mental health of individuals across the life course (e.g., Aneshensel and Sucoff 1996; Christie-Mizell et al. 2003; Schieman and Meersman 2004; Steptoe and Feldman 2001). The effects of perceived neighborhood conditions may be especially pernicious for older adults because the physical and social changes which accompany aging can heighten the salience of neighborhood conditions for older adults (Cantor 1975; Glass and Balfour 2003; Oh 2003). Therefore, this dissertation focuses on the factors which help prevent the effects of perceived neighborhood disorder on elders' mental health.

In investigating these protective factors, this dissertation explicitly employs a stress process perspective (Pearlin 1999). A stress process perspective suggests that the effects of stress on mental health occur indirectly, and these indirect effects may occur in part through the loss of psychological resources such as the self-concept. A stress process perspective is a consciously sociological perspective, pointing out that the process by which stress affects mental health is influenced by the structural arrangements in which individuals are embedded (Pearlin 1989). Because social institutions are in part large social structures which pattern human behavior, thereby providing structure to society (Turner 1997), one potentially fruitful avenue for understanding individual enmeshment in social structure is through the study of institutional involvement. Through involvement in institutions, individuals become embedded within the structural arrangements of society, thereby influencing how stress affects mental health. Furthermore, since the self is a social

product (Rosenberg 1981), social circumstances can help replenish the self (Pearlin 1999), suggesting that institutional involvement may be especially important within the stress process as a means of preventing the loss of self due to stress, thereby preventing the negative effects of stress on mental health. The stress process model also indicates that social status is endemic to each aspect of the stress process, leading us to ask how the protective effects of institutional involvement vary by social status variables, such as race, gender, and class.

A review of the literature indicates that neighborhood disorder leads to a loss of mastery, which in turn negatively impacts elders' mental health. However, this review also suggests that involvement in the family institution through marriage helps facilitate a social setting which is predictable and responsive to one's needs, so that marriage helps establish more proximal arena of social concern within the more distal disordered neighborhood, thereby staving off effects of neighborhood disorder on mastery. Therefore, the first question addressed in this research is whether marriage helps prevent increases in psychological distress due to neighborhood disorder by preventing a loss of mastery. In addition, the literature review indicates that the benefits of marriage may vary by gender, so that this research also examines whether these preventative effects vary by gender.

This literature review also suggests that neighborhood disorder leads to the loss of a second component of the self, sense of divine control, and the loss of a sense that we are being guided and protected by a higher power likely leads to an increase in psychological distress. However, theory in the sociology of religion (Berger 1967), as well as structural symbolic interaction (Stryker 1980), also

suggests that involvement in the religious institution through religious activities helps prevent these effects. Therefore, the second question addressed in this research is whether involvement in religious activities helps prevent increases in psychological distress due to neighborhood disorder by preventing a loss of sense of divine control. The literature review also suggests that variations in religiosity by race and SES may lead to differences in the moderating effects of religious activities, so this research also examines whether the way in which religious activities moderate the effects of perceived neighborhood varies by race and SES.

The literature review also suggests that, by preventing a loss of self due to neighborhood disorder, institutional involvement may also prevent a second set of consequences for mental health by decreasing the likelihood of “structural amplification” (Ross et al. 2001). Structural amplification refers to a process whereby the loss of a psychological resource exacerbates the effects of a stressor, so that when a stressor creates the loss of this resource, it amplifies its own effects. Therefore, an additional contribution of this dissertation is to examine whether loss of mastery and sense of divine control amplify the effects of neighborhood disorder on mental health. Demonstration of these structural amplification effects contributes to a focus on the role of institutional involvement in the stress process because it demonstrates that, by preventing a loss of the self, institutional involvement also prevents the amplification of the mental health effects of neighborhood disorder. Therefore, the third question examined in this research is whether losses in mastery and sense of divine control exacerbate the effects of neighborhood disorder on mental health. However, the literature review also

indicates that the loss of mastery and sense of divine control may have greater resonance for individuals at lower levels of social status, so this research also examines whether loss of mastery and sense of divine control amplifies the effects of neighborhood disorder on mental health more strongly for women, African-Americans, and elders at lower levels of SES. For the most part, the question of whether structural amplification varies by race, class, and gender has not been addressed by previous research, so an additional contribution of this dissertation is to integrate the concept of structural amplification into the stress process perspective by examining how structural amplification may vary by gender, race, and class.

In terms of the first research question, this dissertation shows that neighborhood disorder is related to losses in mastery over the course of the study, but this relationship is far weaker for the married than the non-married. Furthermore, increased levels of neighborhood disorder are also related to increases in depression and anger over the course of the study, and these effects are also much weaker for the married. In addition *baseline* mastery does not explain differences between the married and non-married in the mental health effects of neighborhood disorder, but *change* in mastery explains these effects (although only partially for anger). In addition, for no outcome does the protective effects of marriage differ significantly between men and women.

Therefore, marriage does help protect elders from the mental health effects of neighborhood disorder. Furthermore, that these protective effects are not at all explained by controlling for baseline mastery, but are explained by controlling for *changes* in mastery, demonstrates that these protective effects are not due to

advantages that the married may have had in mastery at the beginning of the study, but are instead specifically due to differences between the married and non-married in changes in mastery. Hence, marriage helps protect elders' mental health because it protects elders from the pernicious effects of neighborhood disorder on sense of control. The importance of this finding is two-fold. First, it confirms a basic sociological perspective on the self, showing how the self is in part a product of social forces. However, it extends this perspective by demonstrating that the self is not fixed at any one point in the life course, but continues to be shaped by social forces well into old age. Second, it demonstrates that the power of institutional involvement may continue to be important for adults, even if this institutional involvement began as long as several decades ago. Focusing on the role of institutional involvement in the stress process may therefore have great utility because the potency of institutional involvement in this process is long-lasting.

It is also intriguing to note that change in mastery explains the buffering effects of marriage entirely for depression, but only partially for anger. In part, this might be because there are additional mechanisms which may help explain this relationship. One of the most likely may be that, in addition to protecting elders' mastery, marriage may prevent a loss of perceived social support. Social support has been shown to be strongly related to mental health (Turner and Turner 1999), and neighborhood disorder is likely to decrease the degree to which individuals see their social environment as supportive. However, knowing that there is a partner with whom "people typically have established patterns of responsibilities and commitments" (Schieman and Taylor 2001:470) will likely help maintain one's

perceptions of social support. Unfortunately, perceived social support was not measured in the third wave of the ASH data, so this question could not be addressed. Therefore, an additional area for future research is to examine if, in addition to mastery, marriage also protects elders' mental health from the effects of neighborhood disorder by protecting elders' perceived social support.

The differences in the ability of change in mastery to explain the buffering effects of marriage for depression and anger may also be due to the fact that the buffering effect of marriage is stronger for anger than depression, so there is more variance to explain for this affect. Why marriage may have a stronger buffering effect for anger is not clear, especially since there are no gender differences in these buffering effects. However, this may be because, as an externalizing set of symptoms, the marital partner is more easily able to react to expressions of anger. Conversely, as a set of internalization symptoms, the effect of the stressful neighborhood on depression may be less apparent and, as a result, the marital partner may be less easily able to react to these effects. Therefore, an additional area for future research is to examine whether the support provided from a marital partner when stress is encountered may vary by the dimension of mental health being examined.

One additional question which emerged from this part of the analyses pertains to the lack of gender differences in the protective effects of marriage. While there is evidence to support the argument that marriage may be more beneficial for men for externalizing symptoms and women for internalizing symptoms (e.g., Simon 2002), this pattern of results is not shown here. In part, this

may be due to differences in sample sizes, as, for instance, Simon's (2002) work uses a sample size of over 10,000, while the sample size used in this study is less than 10% of this size.⁴¹ However, it should also be noted that this finding is actually not as surprising as it might seem in light of more recent research. Using a sample in the thousands, Bierman et al. (2006) found no gender differences in the mental health advantage of the married for psychological distress or alcohol abuse. Furthermore, using longitudinal data, Williams (2003) found few gender differences in marriage and mental health, as well as few gender differences in the mental health effects of transitioning in and out of marriage; in addition, Williams (2003) also found little evidence of gender differences in the mental health effects of marital quality. Therefore, while it may still be possible that marriage may have gender-specific benefits, it is also possible that the detection of these benefits may require a sample size so large that the substantive significance of these gender differences is questionable.

In terms of the second research question, neighborhood disorder does result in losses in sense of divine control, but these effects are contingent on both education and frequency of attendance at religious services. Although there is little

⁴¹ One additional point the question of sample size raises is whether the models had sufficient statistical power to detect interactions. However, if the models were underpowered because of a lack of sample size, then this suggests conservative tests of these three-term interactions, so that any significant three-term interactions are especially notable. This therefore lends confidence to the significant interactions which were found in this dissertation.

effect of neighborhood disorder on the sense of divine control of elders with low levels of education (regardless of their level of religious attendance), neighborhood disorder results in loss of sense of divine control for those with higher levels of education. Effects of neighborhood disorder on the sense of divine control of elders with higher levels of education are weakened as elders' frequency of attendance at religious services increases. The moderating effects of involvement in religious activities do not, however, vary by race. These results support the argument that sense of divine control is more central in the lives of lower SES individuals and, as a result, less likely to change as a result of neighborhood disorder. However, for individuals at higher levels of education, sense of divine control is less stable, and therefore more sensitive to social ecological conditions. Consequently, religious involvement is needed to bolster the sense of divine control of individuals at higher levels of education.

Two important questions are raised from this portion of the analyses. First, much research has indicated that religion is often more important in the lives of African-Americans than whites, and Schieman and Bierman (2006) demonstrated that, similar to lower SES elders, the sense of divine control of African-American elders was more stable than the sense of divine control of white elders. This leads to the question of why a pattern for the effects of neighborhood disorder on sense of divine control are not found for race in a way that it is for SES. This may be because, as a group, the sense of divine control of whites may be no more or less likely to be impacted by neighborhood disorder, but it is specifically those at higher levels of education who are less accustomed to neighborhood disorder, and therefore

more likely to have their sense of divine control impacted by neighborhood disorder. However, given these differences, the way in which neighborhood disorder may affect religiosity differently by race and SES is worthy of further attention, as is the question of whether these effects may differ by the dimension of religiosity being examined.

These results also raise the question of why religious attendance prevents the effects of neighborhood disorder on sense of divine control, but prayer does not. These results suggest that it is specifically the social aspects of religion which help prevent a loss of sense of divine control due to neighborhood disorder. In part, this may be because involvement with a religious community helps create a more proximal arena of social concern similar to marriage, so that individuals who attend religious services regularly are more insulated from neighborhood disorder. However, this may also be because increased levels of religious attendance facilitate the opportunity for religious social support (e.g., Krause 2002). It may also be that increased attendance increases the individual's network connections within the congregation, so that the religious identity has greater salience (e.g., Stryker and Serpe 1982), and the individual is more reluctant to discard religious beliefs associated with this identity. Therefore, an additional area for future research is to focus on the mechanisms which may allow attendance to prevent negative effects of neighborhood disorder on religious cognitions.

Despite the protective effects of attendance for sense of divine control, neither attendance nor frequency of prayer buffers the effects of neighborhood disorder on mental health, and additional analyses show that these buffering effects

are not conditional on either race or SES. This is somewhat surprising given the wealth of research published in the last decade indicating a positive relationship between religious involvement and mental health (e.g., Hackney and Sanders 2003; Koenig and Larson 2001). It should be noted, though, that the majority of this research has examined a *direct* relationship between religious involvement and mental health, and far less research has examined the extent to which religion plays a buffering role in the effects of stress on health. Furthermore, research which has examined these buffering effects has sometimes found inconsistent evidence. Using a nationally representative survey of adults at midlife, for instance, Bierman (2006) found that religious attendance buffered the effects of perceived discrimination on mental health, but only for some outcomes and for some groups, while Strawbridge et al. (1998) found that private and public forms of religiosity buffered the effects of stressors outside the family on mental health, but *exacerbated* the effects of stressors within the family on mental health. Clearly, then, what is needed in the future is greater theoretical attention to describing the types of stressors religious involvement might be most likely to buffer, as well as the dimensions of mental health for which these buffering effects are likely to be most potent.

One possible avenue for future theorizing and research is that the focus on religious involvement as a buffer should not so much be on the degree to which individuals are involved in religion through religious activities, but instead *how* they are involved. Psychologists of religion have suggested that individuals may be oriented to religion differently, with some individuals “extrinsic” in orientation and others “intrinsic.” As Allport (1966:454) explained: “This distinction helps us

separate churchgoers whose communal type of membership supports and serves other, nonreligious ends, from those for whom religion is an end in itself—a final, not instrumental, good.” As an example of extrinsic orientation, Batson, Schroenrade, and Ventis (1993:158) give an example of a businessman who goes to church only because it is “good for business,” thereby using religion for self-serving purposes, while someone with an intrinsic orientation would be engaged in religion as “an active, directing force, not just a tool to reach self-serving ends.” In addition, Batson and his colleagues introduced the concept of a third orientation, “quest” orientation, an “open-ended, questioning approach,” which “involves honestly facing existential questions in all their complexity, while at the same time resisting clear-cut, pat answers” (Batson et al. 1993:166). While much research on these orientations and a number of different outcomes has been conducted by psychologists (for reviews, see Spilka et al. (2003) and Batson et al. (1993)), sociologists have largely ignored these concepts and measures. Hence, for this dissertation, there was little theoretical basis to consider these orientations in relation to a sociological perspective on stress and health, and measures of these orientations were not available within the ASH data. However, the lack of buffering effect for religion found here may reflect a need to more carefully consider individual orientation to religion in conjunction with degree of involvement in religious activities. For example, individuals who attend religious services regularly and have an intrinsic orientation may gain much more support in the face of stress than individuals with an extrinsic orientation. Clearly, then, as sociologists consider a more theoretically comprehensive explanation of the way in which religious

involvement may buffer the effects of stress on mental health, one way to start may be to consider religious orientation in conjunction with levels of private and public religious activities.

In terms of the third question, decreases in mastery amplify the effects of neighborhood disorder on both depression and anger, but these effects are contingent on both gender and SES. For depression, the moderating effects of change in mastery are much stronger for women and elders at lower levels of education. Furthermore, these effects are similar in that, for both groups, decreases in mastery increased the strength of the effect of neighborhood disorder on increases in depression. However, neighborhood disorder had little effect on depression for elders in these groups who retained approximately the same amount of mastery throughout the study, and neighborhood disorder was actually related to *decreases* in depression for elders in these groups who experienced an increase in mastery. Although the latter effect was somewhat surprising, it is theoretically understandable, in that increases in mastery likely helped offset previous effects of neighborhood disorder on depression.

The main result of interest for this portion of the analyses, though, is that decreases in mastery amplify the effects neighborhood disorder on depression, but only for individuals who are lower in social status, in terms of both gender and SES. In part, this may be because individuals in lower social standing began the study with lower levels of baseline mastery. Ancillary analyses indicated that mean levels of mastery were significantly lower when women were compared to men ($p < .01$), as well as when individuals with a high school degree or lower were compared to

individuals with education beyond high school ($p < .001$). At the same time, African-Americans also had lower levels of baseline levels of mastery, although it should be noted that the statistical significance of these differences were not as strong ($p < .05$). This suggests that that the amplifying effects of losses in mastery were selective for women and individuals at lower levels of SES in part because the differences in baseline levels of mastery were more stark for these groups. It is also possible, though, that gender and SES differences in a variety of alternative coping resources were much greater than racial differences, and the lesser access of women and elders with low education to these alternative resources explains why these amplifying effects were observed for women and elders with lower levels of education, but not African-Americans. Therefore, future research should examine how structural amplification operates in the context of a wide number of different coping resources.

It should also be remembered that a similar amplifying effect of change in mastery was also found for anger, but only for elders at lower levels of education, and not for women. That the amplifying effects of losses in mastery were found to be greater for women than men for depression but not anger is likely due to the fact that women are more likely to internalize reactions to stress than externalize these reactions. Given that these amplifying effects were more likely to occur for women, it is understandable that they would not be observed for anger. Since the same pattern of specificity for internalizing and externalizing has not been noted as often for SES, it is therefore understandable that these education-specific amplifying effects were observed across mental health outcomes.

The larger meaning of the amplifying effects of losses in mastery can be understood in the context of institutional involvement. Since marriage helps prevent the effects of neighborhood disorder on losses in mastery, this pattern of results indicates that the effects of neighborhood disorder on mental health are selective by the intersection of marriage and social status. Specifically, neighborhood disorder may have more serious consequences for the mental health of non-married elders because neighborhood disorder leads to decreases in mastery, but these mental health effects are likely particularly potent for non-married women and elders at lower levels of education, because decreases in mastery not only lead to increases in depression and anger, but also amplify the effects of neighborhood disorder on mental health. Thus, it is bad for elder's mental health to live in a disordered neighborhood and be unmarried, but it is worse to be unmarried *and* a woman or unmarried *and* low in education.

In contrast to mastery, sense of divine control does not significantly moderate the effects of neighborhood disorder for either mental health outcome, and this moderation is not conditioned on race, gender, or SES. This is somewhat surprising because one would expect that a decrease in the sense that a higher power guides one's life and is in control of one's life's outcomes would leave elders feeling more vulnerable to the threat of neighborhood disorder. However, sense of divine control is only one dimension of religiosity, and it may be possible that, even if elders' sense of divine control decreased as a result of neighborhood disorder, other aspects of their religiosity remained constant. Consequently, it may be possible that these additional aspects of religiosity must also decrease in tandem

with sense of divine control for losses in sense of divine control to leave individuals feeling more stress from neighborhood disorder, but it is also possible that it is decreases in the additional aspects of religiosity which may be more likely to amplify the effects of neighborhood disorder. From a sociological perspective, two of the most likely aspects to examine are the degree of spiritual and emotional support received from members of one's religious community (see Krause 2002). For instance, a loss of sense of divine control may be more likely to leave individuals feel more exposed to the threat of neighborhood disorder when this loss is accompanied by a decrease in the degree to which one's co-religionists support his or her faith; in addition, the loss of emotional support from the religious community may leave the individual feeling less cared for, and therefore more threatened by the larger environment.

From a broader theoretical perspective, the analyses in this dissertation reflect the utility of focusing on the role of institutional involvement in the stress process. Focusing on institutional involvement helps demonstrate that the ramifications of neighborhood disorder vary not just by social status, but also by involvement in social structure through institutional involvement, especially marriage. The analyses in this dissertation therefore serve to buttress the central thrust of a stress process perspective as seeing the nature of the relationship between stress and mental health as socially derived and socially contingent. Hence, including a focus on institutional involvement in the study of the stress process helps highlight the socially structured contingent nature of mental health, thereby

augmenting the rebuttal to those who dispense with social explanations of mental health in favor of a more exclusive focus on genetic or psychological explanations.

Therefore, this dissertation is united by a focus on social institutions. While I examine different types of institutions, and in fact show that the protective effects of these institutions pertain to different aspects of the self-concept, the unity is provided by the larger conceptual framework. The overarching framework of this dissertation is that structural embeddedness, as indicated by institutional involvement, protects the self from the effects of stress, which in turn protects mental health. By showing that different types of institutional involvement protect different aspects of the self, it may be quite easy to overlook this overarching framework, but it should be emphasized that not only does such a framework exist, it is based within an attempt to underscore the structural nature of the stress process by focusing on social institutions as a key demarcation of institutional enmeshment. Thus, this dissertation presents not only an examination of the way in which involvement in the family and religion prevent the effects of neighborhood disorder, but, on a more general level, a strategy for emphasizing the sociologically-based nature of the stress process perspective through a focus on institutional involvement.

At the same time, though, a stress process perspective also stresses that master social status characteristics such as race, class, and gender pervade each aspect of the stress process (Pearlin 1999), so that an emphasis on the ramification of institutional embeddedness within the stress process necessitates a concomitant focus on the degree to which institutional involvement conditions the effects of stress vary by these mastery social status characteristics. Somewhat surprisingly,

however, the degree to which the types of institutional involvement examined within this dissertation provided protective effects did not vary greatly by these status characteristics. While some research suggested that the protective effects of marriage may vary by gender, this was not the case for the individuals examined here, and ancillary analyses also indicated that these protective effects did not vary by race or gender for either mastery *or* mental health. In addition, the protective effects of religious involvement did not vary by any of these characteristics for mental health, although it should be noted that the degree to which involvement in religion through attendance at religious services protected sense of divine control did vary by levels of education. However, it should be strongly noted that the variation in these protective effects was *not* because the protective potency of religious attendance varied by social class. Rather, additional analyses showed that neighborhood disorder affected the sense of divine control of only those elders with high levels of education; neighborhood disorder had little effect on the sense of divine control of elders at low levels of education, *regardless* of these level of religious attendance. Consequently, there was no effect on the sense of divine control of elders at low levels of SES for religious attendance to prevent. Hence, institutions tended to protect similarly across master status variables, but it was important to also consider whether the stressor actually created an effect the institutional involvement could prevent. These analyses therefore demonstrate the power of institutional involvement across different aspects of social status, thereby showing how attention to individual embeddedness within the structures of society is critical for understanding the effects of stress across a diversity of social

experiences within society. At the same time, the extent to which these institutions influence individuals may also vary depending on their sensitivity to stress, and the effects of stress may in turn be patterned by critical social status characteristics.

Nevertheless, it should also be noted that the degree to which institutional involvement protected the self did matter differently by different aspects of social status, because loss of the self amplified the effects of stress on mental health differently by social status. For women and elders with lower levels of education, loss of mastery strengthened the effects of neighborhood disorder on mental health. Therefore, even if institutions may protect the self similarly across master status variables, the importance of protecting individuals from the loss of self may vary greatly. Most likely, this variation occurs because access to coping resources is structured by status within society, so that the loss of self is far more detrimental to those who are lower in social status because these individuals have fewer alternative coping resources when this loss of self occurs. Hence, even if enmeshment within social structure provides similar protective effects across different aspects of society, the importance of this protection may vary by critical aspects of social experiences. This research therefore demonstrates that stress process researchers must not only consider the degree to which individuals are involved within the structures of society, but also the extent to which the experience of the protective effects of institutions may vary in importance by individuals' social statuses. In sum, then, this research shows how stress functions within a matrix of intersecting social and structural locations, indicating the necessity of a quintessentially sociological framework for understanding how stress affects mental health.

Limitations

There are, however, several weaknesses in this study which should be acknowledged. It was not nationally representative, so the question of whether the pattern of results observed here will generalize to broader samples remains.

However, the diversity with which this sample was purposely gathered suggests that these results are likely to be applicable to a broader population. In addition, it would be useful to study the effects of perceived neighborhood conditions over a longer length of time. It would also be useful to have examined neighborhood disorder at both waves, so that the extent of perceived changes in neighborhood conditions, as well as changes in neighborhood location, could also have been examined. However, it is questionable as to whether neighborhood conditions would have changed a substantial amount over only a two-year period.

Furthermore, that the effects of perceptions of neighborhood disorder can be observed over this short of a time period lends confidence to the robustness of the relationships observed within this dissertation.

The question of measuring change in neighborhood disorder raises a larger question, in that, while change is examined as a dependent variable or as a moderator in these models, change in the control variables is not controlled. The primary reasons for not including change in control variables as covariates is the lack of measures of change in all control variables, and, more importantly, a lack of measure of change in neighborhood disorder, so that it would be impossible to discern the degree to which the effects of change in control variables are in fact due to concurrent change in neighborhood disorder. Even if changes in all control

variables were included as additional control variables, though, it is unlikely that the moderating effects observed here would be reduced greatly in significance. For the moderating effects of marriage and religious attendance, one would have to assume that it is not the effects of *baseline* neighborhood disorder which are being moderated, but instead an unmeasured changing control variable or variables which are related to neighborhood disorder. However, since baseline neighborhood disorder would chronologically precede these changes, and they would be related to neighborhood disorder, what would be far more likely is that the baseline neighborhood disorder leads to increases in additional stressors, in a process of “stress proliferation” (Pearlin 1999), so that increases in these stressors become mediating mechanisms for the effects of neighborhood disorder. Assuming that it is the effects of increases in these stressors which marriage and religious attendance are moderating, then this does *not* mean that these institutional involvements do not moderate the effects of neighborhood disorder; rather, it would mean that marriage and religious attendance prevent the effects of baseline neighborhood disorder by preventing the effects of stressors which extend from neighborhood disorder. These institutional involvements would still prevent the effects of neighborhood disorder, they would just do so by preventing the ramifications of disorder from affecting the self and mental health.

The question of whether the moderating effects of change in mastery would be ruled out by inclusion of measures of changes in the control variables is somewhat more difficult to answer because it is possible that mastery could decrease as a result of neighborhood disorder in tandem with the increases in other

stressors. However, from a theoretical standpoint, the elimination of the effects of structural amplification due to decreases in mastery would be quite surprising. Perceived control is one of the most important beliefs about self and society for mental health, and perceived control is often a reflection of a variety of social conditions (Mirowsky and Ross 2003; Ross and Mirowsky 2003). Consequently, it is likely that the effects of secondary stressors which extend from baseline neighborhood disorder would be reflected in decreases in mastery, so that it is ultimately the decreases in mastery which amplify the effects of neighborhood disorder on mental health. In this set of events, then, increases in additional stressors through stress proliferation do amplify the effects of neighborhood disorder, but they do so by decreasing mastery, which in turn amplifies the effects of baseline neighborhood disorder. While this order of effects is not specifically demonstrated within this dissertation, the function of perceived control as a reflection of life conditions suggests that it is likely.

It also remains to be seen as to whether the results observed here would be replicated in a younger sample. Younger adults may be more likely to travel outside the neighborhood, and may also have a larger social network than older adults. Consequently, neighborhood disorder may have less of an impact on younger adults, and marriage may be a less central resource for social support for these adults. Therefore, an additional area for future research is to examine whether there are age differences in the extent to which marriage buffers the effects of neighborhood disorder on mental health, and also examine whether involvement in other institutions may have more efficacious buffering effects for younger adults. For

instance, involvement in work or education may help younger adults who feel stress from the disordered neighborhood, because the sense that they are gaining power through education or a career may prevent the effects of perceived disorder on mastery.

It should also be acknowledged that there was only a moderate mean level of neighborhood disorder within this sample. While there was also a relatively great amount of variation in the disorder that people reported, the overall level of disorder is not extreme. The fact that even moderate levels of disorder lead to changes in the self and mental health, especially in later life, therefore speaks to the power of these effects and indicates how neighborhood disorder may be especially important to consider for older adults. Further, given the noted difficulty in linking attitudes and behavior (Schuman 1995), that moderate levels of perceptions of disorder can still be shown to interact with behaviors such as religious attendance to affect other types of cognitions, such as sense of divine control, especially speaks to both the power of neighborhood disorder and the notability of the moderating effects observed in this dissertation. However, this also leaves open the question of whether marriage would have as powerful buffering effects when individuals are faced with more extreme levels of disorder. Clearly, this is an additional area for future research.

One additional limitation which should be noted is that denominational affiliation was not controlled in the analyses, mainly because there was no measure of denomination within the data. To a certain extent, this may not be a major drawback, as studies indicate that, independent of attendance, denomination is not a

significant predictor of psychological distress and well-being (Ellison et al. 2001; Schnittker 2001). In addition, the local setting of this study suggests that the elders sampled within it who are religious are likely to be overwhelmingly Christian. However, this does not indicate the extent to which the effects of neighborhood disorder on sense of divine control may vary by denomination, nor the extent to which the buffering effects of attendance vary by denomination. This is important to consider given that, unexpectedly, neither attendance nor prayer buffered the effects of neighborhood disorder on mental health, so these lack of significant effects may indicate that the capability of religious involvement to buffer the effects of neighborhood disorder is specific to certain denominations. Denomination may also be important to consider because more theologically conservative Protestant denominations may be more likely to reinforce the sense that a divine power guides one's life. Consequently, attendance at these denominations may prevent the effects of neighborhood disorder more than attendance at more theologically liberal denominations. Therefore, the extent to which the relationship between stress, sense of divine control, and mental health varies by religious denomination should be considered in future research, and research should also examine how the moderation of these relationships varies by religious denomination.

Summary

In all, this dissertation demonstrates the utility of including a focus on institutions within a stress process perspective. A stress process focus on the embeddedness of individuals within structural arrangements leads us to consider the role of social structure within the stress process, while an understanding of institutions as contributing to the structure of society leads us to focus on institutional involvement as a primary indication of an individual's enmeshment in social structure. This research demonstrates that the degree to which elders are involved in the family through marriage and religion through religious attendance helps prevent the effects of neighborhood disorder on the self, and, for marriage, in turn prevents the effects of neighborhood disorder on mental health. Therefore, understanding how individuals are involved in institutions is a useful way of applying a sociological perspective to the relationship between stress and mental health. Clearly, the most important avenue of research which could emerge from this dissertation is a greater focus on the way that different types of institutional involvement may prevent the effects of different types of stressors on mental health, as well as the degree to which these buffering effects vary by social status. Such a focus can help demonstrate the role of social structure in shaping the ramifications of stress, thereby bringing greater attention to the power of the sociological explanation for the relationship between stress and mental health inherent within the stress process perspective.

TABLE 1
Descriptives and Correlations for Variables Used in Analyses

	Mean	S.D.	Min	Max	Perceived Disorder	Married	Attendance	Prayer	Gender	Race	Education
Perceived Disorder	1.350	0.414	1.00	4.00	1.000						
Married	0.548	0.498	0.00	1.00	-0.077 *	1.000					
Frequency of Religious Attendance	3.093	1.340	1.00	5.00	0.036	-0.067	1.000				
Frequency of Prayer	4.648	1.607	1.00	6.00	0.056	-0.137 ***	0.548 ***	1.000			
Gender (Women=1)	0.505	0.500	0.00	1.00	0.016	-0.374 ***	0.155 ***	0.235 ***	1.000		
Race (Black=1)	0.496	0.500	0.00	1.00	0.062	-0.119 **	0.278 ***	0.407 ***	0.009	1.000	
Education	4.527	1.631	1.00	6.00	-0.171 ***	0.166 ***	-0.126 ***	-0.290 ***	-0.168 ***	-0.285 ***	1.000
Change in Depression	0.005	0.490	-2.67	2.50	-0.005	-0.004	-0.010	-0.022	0.012	-0.016	0.017
Wave 1 Depression	1.413	0.503	1.00	4.00	0.145 ***	-0.110 **	-0.040	0.043	0.122 ***	-0.008	-0.092 **
Change in Anger	0.087	0.531	-2.80	2.40	-0.056	0.054	-0.018	0.038	0.042	-0.011	0.028
Wave 1 Anger	1.324	0.469	1.00	4.00	0.222 ***	0.068 *	-0.069 *	-0.094 **	-0.055	-0.063	-0.007
Change in Mastery	-0.049	0.481	-1.55	1.80	-0.013	0.000	0.000	0.008	0.025	-0.012	0.051
Wave 1 Mastery	2.944	0.448	1.60	4.00	-0.110 **	0.090 **	0.013	-0.122 ***	-0.091 **	-0.077 *	0.231 ***
Change in Sense of Divine Control	-0.064	0.495	-1.50	1.75	-0.088	0.014	-0.078 *	-0.090 **	-0.045	-0.057	0.122 ***
Wave 1 Sense of Divine Control	2.858	0.729	1.00	4.00	0.091 **	-0.142 ***	0.486 ***	0.659 ***	0.174 ***	0.402 ***	-0.323 ***
Age	73.935	6.199	64.00	100.00	-0.099 **	-0.161 ***	-0.037	-0.024	0.042	-0.113 **	-0.059
Time in Marital Status	36.255	20.129	0.00	89.00	0.044	0.350 ***	-0.086 *	-0.072 *	-0.085 *	-0.098 **	0.037
Transition Out of Marriage	0.033	0.178	0.00	1.00	0.009	0.167 ***	-0.013	-0.040	-0.063	0.049	-0.009
Living Child	0.892	0.310	0.00	1.00	-0.079 *	0.194 ***	0.047	0.043	-0.016	0.063	-0.045
Ever Separated or Divorced	0.258	0.438	0.00	1.00	0.026	-0.182 ***	-0.081 *	-0.036	-0.009	0.118 **	-0.053
Time in Neighborhood	24.972	14.226	1.00	90.00	0.050	0.122 ***	0.019	0.026	-0.026	-0.074 *	-0.042
Number of People in Home	2.018	1.088	1.00	11.00	0.013	0.316 ***	0.070 *	0.075 *	-0.103 **	0.191 ***	-0.160 ***
Providing Spousal Caregiving	0.050	0.217	0.00	1.00	0.000	0.208 ***	0.001	0.005	-0.041	-0.015	-0.050
Providing Childcare	0.156	0.363	0.00	1.00	0.068 *	0.049	0.017	0.079 *	0.039	0.120 **	-0.020
Organizational Meeting Attendance	2.018	1.105	1.00	6.00	-0.058	0.030	0.139 ***	-0.023	-0.063	-0.019	0.223 ***
Frequency of Visits	3.451	1.422	1.00	6.00	0.029	-0.093 **	0.059	-0.049	0.025	-0.225 ***	0.128 ***
Frequency of Talking on Phone	4.995	1.253	1.00	6.00	0.033	-0.089 *	0.192 ***	0.198 ***	0.201 ***	0.172 ***	-0.047
Frequency of Volunteering	2.213	1.472	1.00	6.00	0.043	0.068 *	0.237 ***	0.081 *	-0.046	-0.043	0.112 **
Frequency of Attending Theater	1.870	0.854	1.00	6.00	-0.046	0.055	-0.017	-0.192 ***	-0.013	-0.224 ***	0.314 ***
Financial Strain	1.098	0.259	1.00	3.00	0.156 ***	-0.106 **	0.012	0.106 **	0.084 *	0.108 **	-0.194 ***
Working	0.247	0.431	0.00	1.00	-0.006	0.154 ***	-0.071 *	-0.134 ***	-0.191 ***	-0.034	0.186 ***
Physical Limitations	1.129	0.343	1.00	4.00	0.040	-0.113 **	-0.128 ***	0.021	0.064	0.015	-0.123 ***
Wave 1 Anxiety	1.428	0.534	1.00	4.00	0.074 *	0.004	-0.107 **	-0.001	0.128 ***	-0.130 ***	-0.045

*p < .05. **p < .01. ***p < .001.

TABLE 2
 OLS Regressions Examining the Effects of Neighborhood Disorder on Changes in
 Mastery

	Model 1	Model 2	Model 3
Hazard	0.013	0.026	0.006
Baseline Mastery	-0.582 ***	-0.582 ***	-0.583 ***
Perceived Neighborhood Disorder	-0.052	-0.156 **	-0.075
Gender	0.037	0.034	0.024
Race	-0.007	-0.007	-0.007
Age	-0.006	-0.007 *	-0.007 *
Attendance at Religious Services	0.006	0.005	0.005
Prayer	-0.002	0.000	-0.001
Prayer Flag	-0.025	-0.030	-0.029
Education	0.038	0.040 **	0.039 **
Married	0.026	0.026	0.014
Time in Marital Status	-0.001	-0.001	-0.001
Transition out of Marriage	0.024	0.022	0.026
Living Child	-0.028	-0.032	-0.031
Ever Separated or Divorced	0.077 *	0.081 *	0.080 *
Time in Neighborhood	0.001	0.001	0.001
Number of People in Home	0.012	0.011	0.010
People in Home Flag	-0.103	-0.114	-0.114
Providing Spousal Caregiving	0.054	0.051	0.052
Providing Childcare	0.001	-0.006	-0.006
Organizational Meeting Attendance	-0.004	-0.005	-0.005
Frequency of Visits	0.014	0.015	0.014
Frequency of Talking on Phone	-0.020	-0.020	-0.021
Frequency of Volunteering	0.009	0.009	0.008
Frequency of Attending Theater	0.027	0.029	0.030
Financial Strain	-0.048	-0.047	-0.041
Working	0.028	0.031	0.031
Physical Limitations	-0.083	-0.077	-0.074
Wave 1 Anxiety	-0.055	-0.062 *	-0.066 *
Neighborhood Disorder x Married		0.215 **	0.115
Neighborhood Disorder x Gender			-0.136
Married x Gender			0.026
Neighborhood Disorder x Married x Gender			0.177
Constant	2.299	2.347	2.345
Adj. R ²	0.232	0.239	0.238

* p < .05. ** p < .01. *** p < .001.

TABLE 3
 OLS Regressions Examining the Effects of Neighborhood Disorder on
 Changes in Mastery, Separately for Married and Non-Married

	Married	Non-Married
Hazard	0.078	0.055
Baseline Mastery	-0.577 ***	-0.585 ***
Perceived Neighborhood Disorder	0.041	-0.149 **
Gender	0.028	0.017
Race	-0.007	0.006
Age	-0.010 *	-0.002
Attendance at Religious Services	0.018	-0.006
Prayer	-0.016	0.016
Prayer Flag	-0.129	0.247
Education	0.032 *	0.049 **
Time in Marital Status	-0.002	-0.001
Transition out of Marriage	0.028	--
Living Child	0.060	-0.066
Ever Separated or Divorced	0.026	0.112 *
Time in Neighborhood	0.002	0.000
Number of People in Home	0.014	0.000
People in Home Flag	-0.143	-0.092
Providing Spousal Caregiving	0.061	--
Providing Childcare	-0.031	0.047
Organizational Meeting Attendance	0.005	-0.022
Frequency of Visits	0.016	0.012
Frequency of Talking on Phone	0.011	-0.054 **
Frequency of Volunteering	0.003	0.008
Frequency of Attending Theater	0.024	0.048
Financial Strain	0.031	-0.085
Working	0.045	0.034
Physical Limitations	-0.181 *	-0.045
Wave 1 Anxiety	-0.066	-0.037
Constant	2.401	2.197
Adj. R ²	0.221	0.263

* p < .05. ** p < .01. *** p < .001.

TABLE 4
 OLS Regressions Examining the Effects of Neighborhood Disorder on Changes in Depression with Marriage as Buffer

	Model 1	Model 2	Model 3	Model 4	Model 5
Hazard	-0.004	-0.016	-0.034	-0.180	-0.178
Baseline Depression	-0.588 ***	-0.586 ***	-0.583 ***	-0.600 ***	-0.607 ***
Perceived Neighborhood Disorder	0.082 *	0.171 **	0.254 **	0.175 **	0.142 **
Gender	0.051	0.053	0.069	0.050	0.058
Race	-0.002	-0.002	-0.002	-0.007	-0.009
Age	0.007 *	0.007 *	0.007 *	0.008 *	0.007 *
Attendance at Religious Services	0.000	0.001	0.001	0.000	0.001
Prayer	-0.002	-0.003	-0.004	-0.003	-0.003
Prayer Flag	0.077	0.082	0.080	0.099	0.092
Education	0.010	0.009	0.008	0.006	0.015
Married	-0.029	-0.029	-0.015	-0.031	-0.025
Time in Marital Status	0.001	0.001	0.001	0.001	0.000
Transition out of Marriage	0.137	0.139	0.142	0.142	0.146
Living Child	-0.002	0.002	0.003	-0.014	-0.022
Ever Separated or Divorced	0.034	0.031	0.029	0.037	0.055
Time in Neighborhood	0.000	0.000	0.000	0.000	0.000
Number of People in Home	0.005	0.006	0.005	0.010	0.013
People in Home Flag	0.150 *	0.159 *	0.157 *	0.152 *	0.127 *
Providing Spousal Caregiving	-0.041	-0.039	-0.037	-0.045	-0.033
Providing Childcare	-0.041	-0.035	-0.036	-0.039	-0.040
Organizational Meeting Attendance	-0.005	-0.004	-0.003	-0.003	-0.004
Frequency of Visits	0.016	0.016	0.015	0.014	0.018
Frequency of Talking on Phone	0.000	0.000	-0.001	0.000	-0.005
Frequency of Volunteering	-0.023 *	-0.023 *	-0.024 *	-0.024 *	-0.022 *
Frequency of Attending Theater	-0.005	-0.007	-0.006	-0.005	0.001
Financial Strain	0.096	0.095	0.096	0.078	0.068
Working	-0.049	-0.052	-0.053	-0.059	-0.053
Physical Limitations	0.079	0.074	0.077	0.082	0.066
Wave 1 Anxiety	0.109 **	0.114 **	0.109 **	0.102 **	0.091 *
Neighborhood Disorder x Married		-0.183 *	-0.275 *	-0.182 *	-0.135
Neighborhood Disorder x Gender			-0.138		
Married x Gender			-0.022		
Neighborhood Disorder x Married x Gender			0.157		
Baseline Mastery				-0.078	-0.207 ***
Change in Mastery					-0.220 ***
Constant	-0.040	-0.079	-0.077	-0.040	0.119
Adj. R ²	0.264	0.269	0.268	0.272	0.306

* p < .05. ** p < .01. *** p < .001.

TABLE 5
 OLS Regressions Examining the Effects of Neighborhood Disorder on Changes in Anger with Marriage as Buffer

	Model 1	Model 2	Model 3	Model 4	Model 5
Hazard	-0.063	-0.079	-0.072	-0.352	-0.339
Baseline Anger	-0.654 ***	-0.656 ***	-0.655 ***	-0.676 ***	-0.670 ***
Perceived Neighborhood Disorder	0.084 *	0.185 **	0.164	0.196 **	0.158 **
Gender	0.049	0.051	0.049	0.044	0.053
Race	-0.070	-0.069	-0.069	-0.080 *	-0.081 *
Age	-0.001	0.000	0.000	0.002	0.000
Attendance at Religious Services	-0.015	-0.014	-0.014	-0.015	-0.014
Prayer	0.006	0.005	0.005	0.003	0.003
Prayer Flag	0.113	0.119	0.119	0.149	0.141
Education	0.016	0.014	0.014	0.010	0.019
Married	0.114 *	0.114 *	0.111	0.111 *	0.117 **
Time in Marital Status	0.000	0.000	0.000	0.000	0.000
Transition out of Marriage	-0.133	-0.131	-0.130	-0.126	-0.120
Living Child	-0.118 *	-0.114	-0.114	-0.138	-0.145 *
Ever Separated or Divorced	0.039	0.036	0.037	0.047	0.065
Time in Neighborhood	-0.001	-0.001	-0.001	-0.002	-0.001
Number of People in Home	0.056 **	0.057 **	0.057 **	0.065 ***	0.067
People in Home Flag	-0.005	0.005	0.006	-0.009	-0.034
Providing Spousal Caregiving	-0.129	-0.127	-0.127	-0.137	-0.125
Providing Childcare	0.063	0.070	0.071	0.064	0.063
Organizational Meeting Attendance	0.010	0.011	0.011	0.013	0.012
Frequency of Visits	-0.004	-0.004	-0.004	-0.006	-0.003
Frequency of Talking on Phone	0.010	0.010	0.010	0.009	0.005
Frequency of Volunteering	-0.008	-0.008	-0.008	-0.010	-0.008
Frequency of Attending Theater	-0.028	-0.031	-0.031	-0.028	-0.021
Financial Strain	0.160 *	0.159 *	0.158 *	0.130	0.119
Working	0.005	0.002	0.003	-0.007	0.000
Physical Limitations	0.057	0.053	0.051	0.062	0.044
Wave 1 Anxiety	0.053	0.060	0.061	0.037	0.020
Neighborhood Disorder x Married		-0.207 **	-0.192	-0.206 **	-0.155 *
Neighborhood Disorder x Gender			0.033		
Married x Gender			0.004		
Neighborhood Disorder x Married x Gender			-0.023		
Baseline Mastery				-0.126 **	-0.261 ***
Change in Mastery					-0.234 ***
Constant	0.676	0.635	0.632	0.696	0.854
Adj. R ²	0.281	0.287	0.284	0.292	0.326

* p < .05. ** p < .01. *** p < .001.

TABLE 6
 OLS Regressions Examining the Effects of Neighborhood Disorder on Changes in
 Sense of Divine Control

	Model 1	Model 2	Model 3
Hazard	-0.029	-0.031	-0.031
Baseline Divine Control	-0.519 ***	-0.519 ***	-0.518 ***
Perceived Neighborhood Disorder	-0.053	-0.051	-0.056
Gender	-0.019	-0.019	-0.018
Race	0.091 *	0.091 *	0.090 *
Age	0.002	0.002	0.002
Attendance at Religious Services	0.033 *	0.033 *	0.034 *
Prayer	0.100 ***	0.100 ***	0.100 ***
Prayer Flag	-0.064	-0.063	-0.063
Education	0.003	0.003	0.003
Married	-0.060	-0.060	-0.060
Time in Marital Status	0.001	0.001	0.001
Transition out of Marriage	0.062	0.061	0.063
Living Child	-0.024	-0.023	-0.027
Ever Separated or Divorced	-0.026	-0.026	-0.025
Time in Neighborhood	-0.001	-0.001	-0.001
Number of People in Home	0.006	0.005	0.006
People in Home Flag	-0.042	-0.042	-0.041
Providing Spousal Caregiving	0.020	0.021	0.020
Providing Childcare	-0.020	-0.020	-0.019
Organizational Meeting Attendance	-0.012	-0.012	-0.013
Frequency of Visits	-0.015	-0.015	-0.015
Frequency of Talking on Phone	-0.001	-0.002	-0.001
Frequency of Volunteering	0.022 *	0.022 *	0.022 *
Frequency of Attending Theater	-0.009	-0.009	-0.009
Financial Strain	-0.066	-0.067	-0.066
Working	-0.003	-0.003	-0.004
Physical Limitations	0.085	0.085	0.086
Wave 1 Anxiety	-0.001	-0.001	-0.001
Neighborhood Disorder x Attendance		-0.012	
Neighborhood Disorder x Prayer			0.012
Constant	1.318	1.316	1.313
Adj. R ²	0.308	0.307	0.307

* p < .05. ** p < .01. *** p < .001.

TABLE 7
 OLS Regressions Examining the Social Status and Religious Contingencies of Effects of
 Neighborhood Disorder on Changes in Sense of Divine Control

	Model 1	Model 2
<i>Panel A: Education Interactions</i>		
Hazard	-0.1098	-0.0543
Baseline Divine Control	-0.5274 ***	-0.533 ***
Perceived Neighborhood Disorder	-0.0538	-0.0496
Attendance at Religious Services	0.042 **	0.034 *
Prayer	0.093 ***	0.091 ***
Prayer Flag	-0.069	-0.077
Education	-0.003	-0.005
Neighborhood Disorder x Attendance	0.031	
Neighborhood Disorder x Education	-0.0115	-0.0144
Attendance x Education	0.0206 **	
Neighborhood Disorder x Attendance x Education	0.0378 *	
Neighborhood Disorder x Prayer		0.0141
Prayer x Education		0.0213 *
Neighborhood Disorder x Prayer x Education		0.0226
Constant	1.3027	1.369
Adj. R ²	0.3179	0.3142
<i>Panel B: Race Interactions</i>		
Hazard	-0.0744	-0.037
Baseline Divine Control	-0.5262 ***	-0.5252 ***
Perceived Neighborhood Disorder	-0.0338	-0.0295
Race	0.1115 **	0.1174 **
Attendance at Religious Services	0.0739 ***	0.0337 *
Prayer	0.0925 ***	0.1191 ***
Prayer Flag	-0.0545	-0.0617
Neighborhood Disorder x Attendance	0.0142	
Neighborhood Disorder x Race	-0.0286	-0.0423
Attendance x Race	-0.0869 ***	
Neighborhood Disorder x Attendance x Race	-0.0306	
Neighborhood Disorder x Prayer		0.0156
Prayer x Race		-0.0727 **
Neighborhood Disorder x Prayer x Race		0.002
Constant	1.35	1.3082
Adj. R ²	0.3172	0.3139

* p < .05. ** p < .01. *** p < .001.

Note: All Models contain controls shown in Table 6.

TABLE 8
 OLS Regressions Examining Educational and Religious Contingencies of Effects of
 Neighborhood Disorder on Changes in Sense of Divine Control

	Low Education	High Education
Hazard	0.0919	-0.1835
Baseline Divine Control	-0.6121 ***	-0.4983 ***
Perceived Neighborhood Disorder	-0.0463	-0.0606
Attendance at Religious Services	0.0147	0.0504 **
Prayer	0.0953 ***	0.0904 ***
Prayer Flag	-0.0457	-0.1394
Neighborhood Disorder x Attendance	-0.0566	0.0906 *
Constant	1.9344	1.1448 *
Adj. R ²	0.4084	0.2926

* p < .05. ** p < .01. *** p < .001. N = 278 low education, 549 high education.

Note: All Models contain controls shown in Table 6.

TABLE 9
 OLS Regressions Examining the Effects of Neighborhood Disorder on Changes in
 Depression with Religious Involvement as Buffer

	Model 1	Model 2	Model 3
Hazard	-0.004	-0.004	-0.001
Baseline Depression	-0.588 ***	-0.588 ***	-0.588 ***
Perceived Neighborhood Disorder	0.082 *	0.083 *	0.087 *
Gender	0.051	0.051	0.050
Race	-0.002	-0.002	-0.001
Age	0.007 *	0.007 *	0.007 *
Attendance at Religious Services	0.000	0.000	-0.001
Prayer	-0.002	-0.002	-0.002
Prayer Flag	0.077	0.077	0.076
Education	0.010	0.010	0.010
Married	-0.029	-0.029	-0.030
Time in Marital Status	0.001	0.001	0.001
Transition out of Marriage	0.137	0.137	0.136
Living Child	-0.002	-0.002	0.003
Ever Separated or Divorced	0.034	0.034	0.033
Time in Neighborhood	0.000	0.000	0.000
Number of People in Home	0.005	0.005	0.005
People in Home Flag	0.150 *	0.150 *	0.149 *
Providing Spousal Caregiving	-0.041	-0.041	-0.042
Providing Childcare	-0.041	-0.041	-0.042
Organizational Meeting Attendance	-0.005	-0.005	-0.005
Frequency of Visits	0.016	0.016	0.016
Frequency of Talking on Phone	0.000	0.000	0.000
Frequency of Volunteering	-0.023 *	-0.023 *	-0.023 *
Frequency of Attending Theater	-0.005	-0.005	-0.005
Financial Strain	0.096	0.096	0.095
Working	-0.049	-0.049	-0.048
Physical Limitations	0.079	0.079	0.078
Wave 1 Anxiety	0.109 **	0.109 **	0.109 **
Neighborhood Disorder x Attendance		-0.003	
Neighborhood Disorder x Prayer			-0.016
Constant	-0.040	-0.040	-0.036
Adj. R ²	0.264	0.264	0.264

* p < .05. ** p < .01. *** p < .001.

TABLE 10
 OLS Regressions Examining the Social Status and Religious Contingencies of Effects of
 Neighborhood Disorder on Changes in Depression

	Model 1	Model 2
<i>Panel A: Education Interactions</i>		
Hazard	0.031	-0.026
Baseline Depression	-0.586 ***	-0.585 ***
Perceived Neighborhood Disorder	0.101 *	0.088 *
Attendance at Religious Services	-0.005	0.000
Prayer	-0.004	-0.015
Prayer Flag	0.093	0.092
Education	0.011	0.005
Neighborhood Disorder x Attendance	-0.017	
Neighborhood Disorder x Education	0.051 *	0.060 **
Attendance x Education	0.003	
Neighborhood Disorder x Attendance x Education	-0.030	
Neighborhood Disorder x Prayer		0.012
Prayer x Education		0.013
Neighborhood Disorder x Prayer x Education		-0.029
Constant	-0.025	-0.032
Adj. R ²	0.270	0.272
<i>Panel B: Race Interactions</i>		
Hazard	0.015	0.000
Baseline Depression	-0.589 ***	-0.586 ***
Perceived Neighborhood Disorder	0.040	0.048
Race	0.007	0.014
Attendance at Religious Services	0.016	-0.001
Prayer	-0.005	0.006
Prayer Flag	0.074	0.075
Neighborhood Disorder x Attendance	-0.063	
Neighborhood Disorder x Race	0.048	0.072
Attendance x Race	-0.040	
Neighborhood Disorder x Attendance x Race	0.101	
Neighborhood Disorder x Prayer		-0.016
Prayer x Race		-0.034
Neighborhood Disorder x Prayer x Race		-0.017
Constant	-0.032	-0.045
Adj. R ²	0.267	0.264

* p < .05. ** p < .01. *** p < .001.

Note: All Models contain controls shown in Table 9.

TABLE 11
 OLS Regressions Examining the Effects of Neighborhood Disorder on Changes in
 Anger with Religious Involvement as Buffer

	Model 1	Model 2	Model 3
Hazard	-0.063	-0.066	-0.066
Baseline Anger	-0.654 ***	-0.654 ***	-0.654 ***
Perceived Neighborhood Disorder	0.084 *	0.087 *	0.080
Gender	0.049	0.049	0.050
Race	-0.070	-0.069	-0.070
Age	-0.001	-0.001	-0.001
Attendance at Religious Services	-0.015	-0.015	-0.014
Prayer	0.006	0.005	0.006
Prayer Flag	0.113	0.114	0.114
Education	0.016	0.015	0.016
Married	0.114 *	0.115 *	0.115 **
Time in Marital Status	0.000	0.000	0.000
Transition out of Marriage	-0.133	-0.135	-0.131
Living Child	-0.118 *	-0.117	-0.123 *
Ever Separated or Divorced	0.039	0.039	0.040
Time in Neighborhood	-0.001	-0.001	-0.001
Number of People in Home	0.056 **	0.055 **	0.056 **
People in Home Flag	-0.005	-0.006	-0.004
Providing Spousal Caregiving	-0.129	-0.127	-0.128
Providing Childcare	0.063	0.063	0.064
Organizational Meeting Attendance	0.010	0.010	0.009
Frequency of Visits	-0.004	-0.004	-0.004
Frequency of Talking on Phone	0.010	0.010	0.010
Frequency of Volunteering	-0.008	-0.009	-0.008
Frequency of Attending Theater	-0.028	-0.028	-0.028
Financial Strain	0.160 *	0.158 *	0.161 *
Working	0.005	0.005	0.004
Physical Limitations	0.057	0.057	0.058
Wave 1 Anxiety	0.053	0.053	0.053
Neighborhood Disorder x Attendance		-0.016	
Neighborhood Disorder x Prayer			0.016
Constant	0.676	0.676	0.673
Adj. R ²	0.281	0.280	0.280

* p < .05. ** p < .01. *** p < .001.

TABLE 12
 OLS Regressions Examining the Social Status and Religious Contingencies of Effects of
 Neighborhood Disorder on Changes in Anger

	Model 1	Model 2
<i>Panel A: Education Interactions</i>		
Hazard	-0.076	-0.101
Baseline Anger	-0.656 ***	-0.656 ***
Perceived Neighborhood Disorder	0.083	0.058
Attendance at Religious Services	-0.014	-0.013
Prayer	0.005	-0.004
Prayer Flag	0.112	0.118
Education	0.015	0.011
Neighborhood Disorder x Attendance	-0.012	
Neighborhood Disorder x Education	-0.009	0.008
Attendance x Education	0.002	
Neighborhood Disorder x Attendance x Education	0.004	
Neighborhood Disorder x Prayer		0.031
Prayer x Education		0.009
Neighborhood Disorder x Prayer x Education		-0.034
Constant	0.669	0.655
Adj. R ²	0.278	0.282
<i>Panel B: Race Interactions</i>		
Hazard	-0.040	-0.070
Baseline Anger	-0.650 ***	-0.657 ***
Perceived Neighborhood Disorder	0.066	0.085
Race	-0.069	-0.066
Attendance at Religious Services	-0.015	-0.014
Prayer	0.006	0.009
Prayer Flag	0.109	0.112
Neighborhood Disorder x Attendance	-0.063	
Neighborhood Disorder x Race	0.019	0.015
Attendance x Race	-0.002	
Neighborhood Disorder x Attendance x Race	0.077	
Neighborhood Disorder x Prayer		0.037
Prayer x Race		-0.010
Neighborhood Disorder x Prayer x Race		-0.053
Constant	0.674	0.679
Adj. R ²	0.279	0.278

* p < .05. ** p < .01. *** p < .001.

Note: All Models contain controls shown in Table 11.

TABLE 13
 OLS Regression Examining Change in Mastery as Moderator for
 Effects of Neighborhood Disorder on Depression

Hazard	-0.156
Baseline Depression	-0.607 ***
Change in Mastery	-0.223 ***
Baseline Mastery	-0.210 ***
Change in Divine Control	-0.024
Baseline Divine Control	0.007
Perceived Neighborhood Disorder	0.077 *
Gender	0.053
Race	-0.011
Age	0.007 *
Attendance at Religious Services	0.001
Prayer	-0.005
Prayer Flag	0.104
Education	0.017
Married	-0.017
Time in Marital Status	0.000
Transition out of Marriage	0.131
Living Child	-0.026
Ever Separated or Divorced	0.054
Time in Neighborhood	0.000
Number of People in Home	0.010
People in Home Flag	0.113
Providing Spousal Caregiving	-0.029
Providing Childcare	-0.035
Organizational Meeting Attendance	-0.006
Frequency of Visits	0.019
Frequency of Talking on Phone	-0.005
Frequency of Volunteering	-0.021
Frequency of Attending Theater	0.000
Financial Strain	0.075
Working	-0.051
Physical Limitations	0.061
Wave 1 Anxiety	0.090 *
Neighborhood Disorder x Change in Mastery	-0.186 **
Constant	0.117
Adj. R ²	0.309

* p < .05. ** p < .01. *** p < .001.

TABLE 14
 OLS Regressions Examining the Effects of Neighborhood Disorder on Changes
 in Depression with Social Status and Mastery as Buffer

<i>Panel A: Gender Interactions</i>	
Hazard	-0.159
Baseline Depression	-0.606 ***
Change in Mastery	-0.213 ***
Baseline Mastery	-0.211 ***
Perceived Neighborhood Disorder	0.105
Gender	0.055
Neighborhood Disorder x Gender	-0.065
Neighborhood Disorder x Change in Mastery	-0.059
Change in Mastery x Gender	-0.026
Neighborhood Disorder x Change in Mastery x Gender	-0.288 *
Constant	0.142
Adj. R ²	0.311
<i>Panel B: Education Interactions</i>	
Hazard	-0.175
Baseline Depression	-0.611 ***
Change in Mastery	-0.212 ***
Baseline Mastery	-0.211 ***
Perceived Neighborhood Disorder	0.095 *
Education	0.015
Neighborhood Disorder x Education	0.031
Neighborhood Disorder x Change in Mastery	-0.169 *
Change in Mastery x Education	0.000
Neighborhood Disorder x Change in Mastery x Education	0.097 *
Constant	0.123
Adj. R ²	0.314
<i>Panel C: Race Interactions</i>	
Hazard	-0.167
Baseline Depression	-0.608 ***
Change in Mastery	-0.261 ***
Baseline Mastery	-0.213 ***
Perceived Neighborhood Disorder	0.032
Race	-0.011
Neighborhood Disorder x Race	0.075
Neighborhood Disorder x Change in Mastery	-0.127
Change in Mastery x Race	0.068
Neighborhood Disorder x Change in Mastery x Race	-0.101
Constant	0.120
Adj. R ²	0.309

* p < .05. ** p < .01. *** p < .001.

Note: All Models contain controls shown in Table 13.

TABLE 15
 OLS Regressions Examining the Effects of Neighborhood Disorder on Changes in
 Depression with Mastery as Buffer, Separately for Men and Women

	Men	Women
Hazard	-0.264	-0.115
Baseline Depression	-0.689 ***	-0.569 ***
Change in Mastery	-0.206 ***	-0.260 ***
Baseline Mastery	-0.177 **	-0.245 ***
Perceived Neighborhood Disorder	0.125 *	0.024
Neighborhood Disorder x Change in Mastery	-0.053	-0.394 ***
Constant	-0.098	0.442
Adj. R ²	0.345	0.297

* p < .05. **p < .01. ***p < .001. N = 409 men and 418 women.

Note: All models contain all controls shown in Table 13.

TABLE 16
 OLS Regressions Examining Change in Mastery as Moderator for the Effects of
 Neighborhood Disorder on Depression, Separately for Elders with Low and High
 Education

	Low Education	High Education
Hazard	-0.065	-0.249
Baseline Depression	0.611 ***	-0.602 ***
Change in Mastery	-0.197 **	-0.205 ***
Baseline Mastery	-0.274 **	-0.191 **
Perceived Neighborhood Disorder	0.059	0.087
Neighborhood Disorder x Change in Mastery	-0.402 **	-0.060
Constant	0.931	-0.509
Adj. R ²	0.377	0.289

* p < .05. **p < .01. ***p < .001. N = 278 low education, 549 high education.

Note: All Models contain all controls shown in models in Table 13.

TABLE 17
 OLS Regression Examining Change in Mastery as Moderator for
 Effects of Neighborhood Disorder on Anger

Hazard	-0.293
Baseline Anger	-0.661 ***
Change in Mastery	-0.240 ***
Baseline Mastery	-0.260 ***
Change in Divine Control	-0.055
Baseline Divine Control	0.003
Perceived Neighborhood Disorder	0.076
Gender	0.050
Race	-0.082 *
Age	0.000
Attendance at Religious Services	-0.015
Prayer	0.003
Prayer Flag	0.144
Education	0.023
Married	0.121 **
Time in Marital Status	0.000
Transition out of Marriage	-0.126
Living Child	-0.144 *
Ever Separated or Divorced	0.068
Time in Neighborhood	-0.001
Number of People in Home	0.065 ***
People in Home Flag	-0.047
Providing Spousal Caregiving	-0.122
Providing Childcare	0.063
Organizational Meeting Attendance	0.010
Frequency of Visits	-0.003
Frequency of Talking on Phone	0.005
Frequency of Volunteering	-0.005
Frequency of Attending Theater	-0.021
Financial Strain	0.117
Working	0.005
Physical Limitations	0.043
Wave 1 Anxiety	0.014
Neighborhood Disorder x Change in Mastery	-0.080
Constant	0.864
Adj. R ²	0.324

* p < .05. ** p < .01. *** p < .001.

TABLE 18
 OLS Regressions Examining the Effects of Neighborhood Disorder on Changes
 in Anger with Social Status and Mastery as Buffer

<i>Panel A: Gender Interactions</i>	
Hazard	-0.282
Baseline Anger	-0.661 ***
Change in Mastery	-0.234 ***
Baseline Mastery	-0.260 ***
Perceived Neighborhood Disorder	0.062
Gender	0.051
Neighborhood Disorder x Gender	0.020
Neighborhood Disorder x Change in Mastery	-0.017
Change in Mastery x Gender	-0.014
Neighborhood Disorder x Change in Mastery x Gender	-0.134
Constant	0.870
Adj. R ²	0.323
<i>Panel B: Education Interactions</i>	
Hazard	-0.323
Baseline Anger	-0.666 ***
Change in Mastery	-0.237 ***
Baseline Mastery	-0.267 ***
Perceived Neighborhood Disorder	0.066
Education	0.021
Neighborhood Disorder x Education	-0.031
Neighborhood Disorder x Change in Mastery	-0.058
Change in Mastery x Education	0.020
Neighborhood Disorder x Change in Mastery x Education	0.094 *
Constant	0.841
Adj. R ²	0.328
<i>Panel C: Race Interactions</i>	
Hazard	-0.315
Baseline Anger	-0.660 ***
Change in Mastery	-0.248 ***
Baseline Mastery	-0.263 ***
Perceived Neighborhood Disorder	0.053
Race	-0.081 *
Neighborhood Disorder x Race	0.044
Neighborhood Disorder x Change in Mastery	0.094
Change in Mastery x Race	0.014
Neighborhood Disorder x Change in Mastery x Race	-0.289
Constant	0.854
Adj. R ²	0.325

* p < .05. ** p < .01. *** p < .001.

Note: All Models contain controls shown in Table 17.

TABLE 19
 OLS Regressions Examining Change in Mastery as Moderator for the Effects of Neighborhood
 Disorder on Anger, Separately for Elders with Low and High Education

	Low Education	High Education
Hazard	-0.262	-1.040
Baseline Anger	-0.689 ***	-0.684 ***
Change in Mastery	-0.264 ***	-0.204 ***
Baseline Mastery	-0.229 *	-0.349 ***
Perceived Neighborhood Disorder	0.156 *	0.050
Neighborhood Disorder x Change in Mastery	-0.237 *	0.069
Constant	0.883	0.810
Adj. R ²	0.351	0.311

* p < .05. **p < .01. ***p < .001. N = 278 low education, 549 high education.

Note: All Models contain all controls shown in models in Table 17.

TABLE 20
 OLS Regression Examining Change in Divine Control as Moderator for
 Effects of Neighborhood Disorder on Depression

Hazard	-0.145
Baseline Depression	-0.608 ***
Change in Mastery	-0.226 ***
Baseline Mastery	-0.211 ***
Change in Divine Control	-0.027
Baseline Divine Control	0.011
Perceived Neighborhood Disorder	0.067
Gender	0.056
Race	-0.013
Age	0.006 *
Attendance at Religious Services	-0.001
Prayer	-0.004
Prayer Flag	0.091
Education	0.018
Married	-0.026
Time in Marital Status	0.000
Transition out of Marriage	0.148
Living Child	-0.020
Ever Separated or Divorced	0.060
Time in Neighborhood	0.000
Number of People in Home	0.012
People in Home Flag	0.118
Providing Spousal Caregiving	-0.031
Providing Childcare	-0.044
Organizational Meeting Attendance	-0.006
Frequency of Visits	0.017
Frequency of Talking on Phone	-0.005
Frequency of Volunteering	-0.021
Frequency of Attending Theater	0.002
Financial Strain	0.062
Working	-0.047
Physical Limitations	0.068
Wave 1 Anxiety	0.087 *
Neighborhood Disorder x Change in Divine Control	-0.078
Constant	0.149
Adj. R ²	0.304

* p < .05. ** p < .01. *** p < .001.

TABLE 21
 OLS Regressions Examining the Effects of Neighborhood Disorder on Changes in
 Depression with Social Status and Divine Control as Buffer

<i>Panel A: Gender Interactions</i>	
Hazard	-0.157
Baseline Depression	-0.607 ***
Change in Divine Control	-0.046
Baseline Divine Control	0.010
Perceived Neighborhood Disorder	0.099
Gender	0.057
Neighborhood Disorder x Gender	-0.060
Neighborhood Disorder x Change in Divine Control	-0.093
Change in Divine Control x Gender	0.034
Neighborhood Disorder x Change in Divine Control x Gender	0.014
Constant	0.154
Adj. R ²	0.302
<i>Panel B: Education Interactions</i>	
Hazard	-0.131
Baseline Depression	-0.607 ***
Change in Divine Control	-0.022
Baseline Divine Control	0.004
Perceived Neighborhood Disorder	0.081 *
Education	0.017
Neighborhood Disorder x Education	0.050 *
Neighborhood Disorder x Change in Divine Control	-0.080
Change in Divine Control x Education	-0.004
Neighborhood Disorder x Change in Divine Control x Education	0.042
Constant	0.151
Adj. R ²	0.306
<i>Panel C: Race Interactions</i>	
Hazard	-0.148
Baseline Depression	-0.607 ***
Change in Divine Control	-0.017
Baseline Divine Control	0.013
Perceived Neighborhood Disorder	0.035
Race	-0.013
Neighborhood Disorder x Race	0.051
Neighborhood Disorder x Change in Divine Control	0.006
Change in Divine Control x Race	-0.013
Neighborhood Disorder x Change in Divine Control x Race	-0.109
Constant	0.144
Adj. R ²	0.302

* p < .05. ** p < .01. *** p < .001.

Note: All Models contain controls shown in Table 20.

TABLE 22
 OLS Regressions Examining the Effects of Neighborhood Disorder
 on Changes in Anger with Sense of Divine Control as Buffer

Hazard	-0.293
Baseline Anger	-0.664 ***
Change in Mastery	-0.241 ***
Baseline Mastery	-0.261 ***
Change in Divine Control	-0.055
Baseline Divine Control	0.006
Perceived Neighborhood Disorder	0.076
Gender	0.052
Race	-0.083 *
Age	-0.001
Attendance at Religious Services	-0.016
Prayer	0.002
Prayer Flag	0.139
Education	0.024
Married	0.118 **
Time in Marital Status	0.000
Transition out of Marriage	-0.120
Living Child	-0.142 *
Ever Separated or Divorced	0.070
Time in Neighborhood	-0.001
Number of People in Home	0.066 ***
People in Home Flag	-0.045
Providing Spousal Caregiving	-0.124
Providing Childcare	0.060
Organizational Meeting Attendance	0.010
Frequency of Visits	-0.003
Frequency of Talking on Phone	0.005
Frequency of Volunteering	-0.006
Frequency of Attending Theater	-0.020
Financial Strain	0.111
Working	0.006
Physical Limitations	0.046
Wave 1 Anxiety	0.015
Neighborhood Disorder x Change in Divine Control	0.005
Constant	0.882
Adj. R ²	0.323

* p < .05. ** p < .01. *** p < .001.

TABLE 23
 OLS Regressions Examining the Effects of Neighborhood Disorder on Changes in
 Anger with Social Status and Divine Control as Buffer

<i>Panel A: Gender Interactions</i>	
Hazard	-0.276
Baseline Anger	-0.660 ***
Change in Divine Control	-0.097
Baseline Divine Control	0.005
Perceived Neighborhood Disorder	0.057
Gender	0.052
Neighborhood Disorder x Gender	0.031
Neighborhood Disorder x Change in Divine Control	0.042
Change in Divine Control x Gender	0.079
Neighborhood Disorder x Change in Divine Control x Gender	-0.054
Constant	0.868
Adj. R ²	0.322
<i>Panel B: Education Interactions</i>	
Hazard	-0.301
Baseline Anger	-0.668 ***
Change in Divine Control	-0.057
Baseline Divine Control	0.010
Perceived Neighborhood Disorder	0.069
Education	0.025
Neighborhood Disorder x Education	-0.027
Neighborhood Disorder x Change in Divine Control	0.015
Change in Divine Control x Education	0.009
Neighborhood Disorder x Change in Divine Control x Education	-0.016
Constant	0.888
Adj. R ²	0.322
<i>Panel C: Race Interactions</i>	
Hazard	-0.296
Baseline Anger	-0.665 ***
Change in Divine Control	-0.041
Baseline Divine Control	0.008
Perceived Neighborhood Disorder	0.057
Race	-0.083 *
Neighborhood Disorder x Race	0.031
Neighborhood Disorder x Change in Divine Control	0.061
Change in Divine Control x Race	-0.022
Neighborhood Disorder x Change in Divine Control x Race	-0.070
Constant	0.880
Adj. R ²	0.321

* p < .05. ** p < .01. *** p < .001.

Note: All Models contain controls shown in Table 22.

Figure 1. Conceptual model of the hypothesized mediators and moderators of the effects of perceptions of neighborhood disorder on mental health

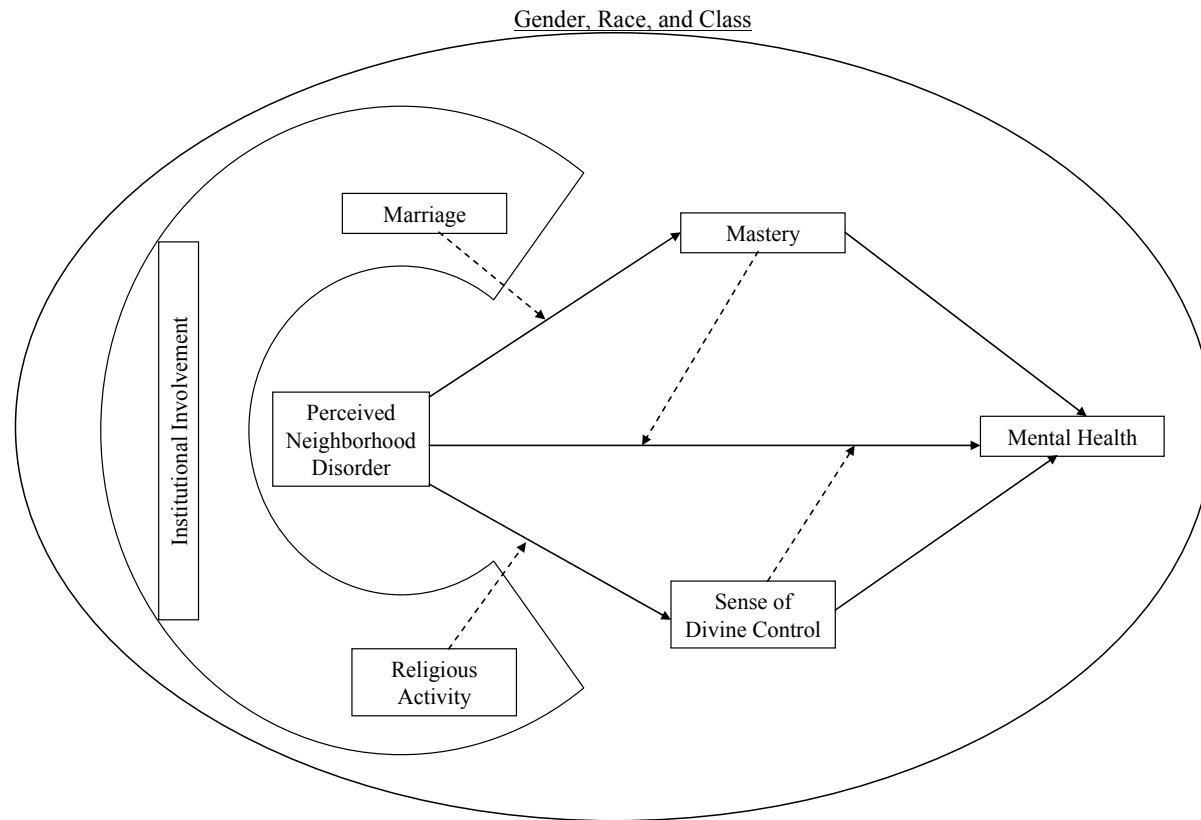


Figure 2. Effects of Neighborhood Disorder on Depression for Married and Non-Married Elders

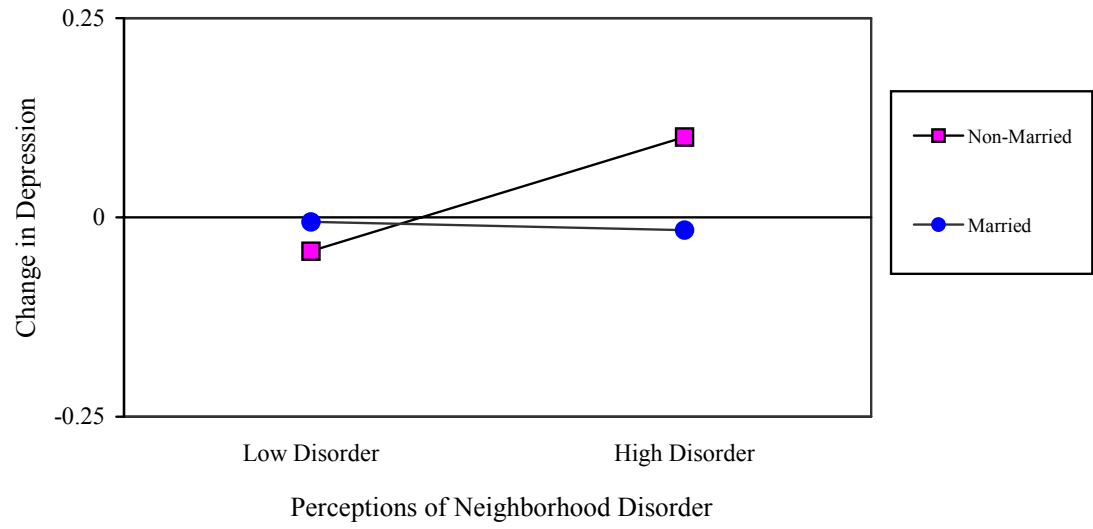


Figure 3. Effects of Neighborhood Disorder on Anger for Married and Non-Married Elders

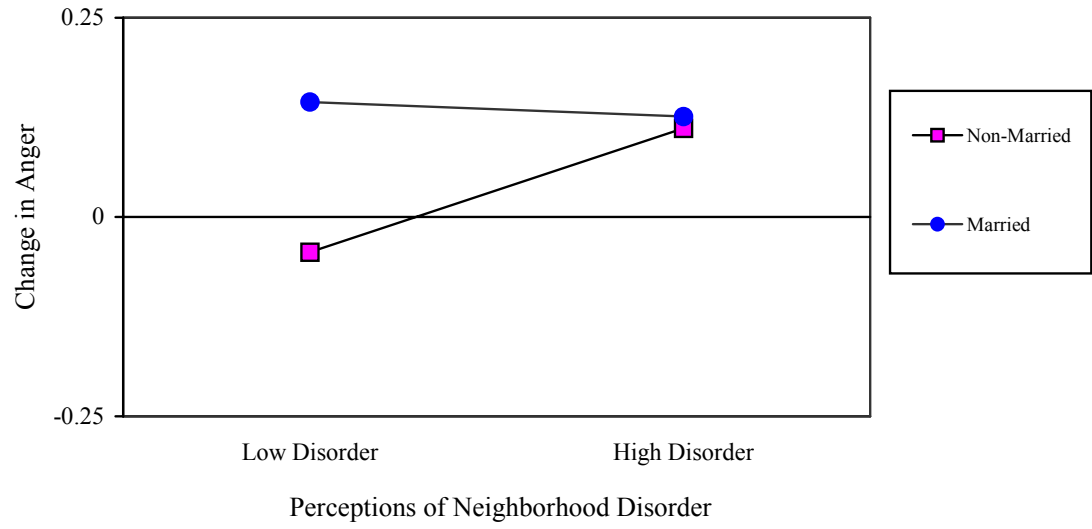


Figure 4. Effects of Neighborhood Disorder on Sense of Divine Control for High Education Elders

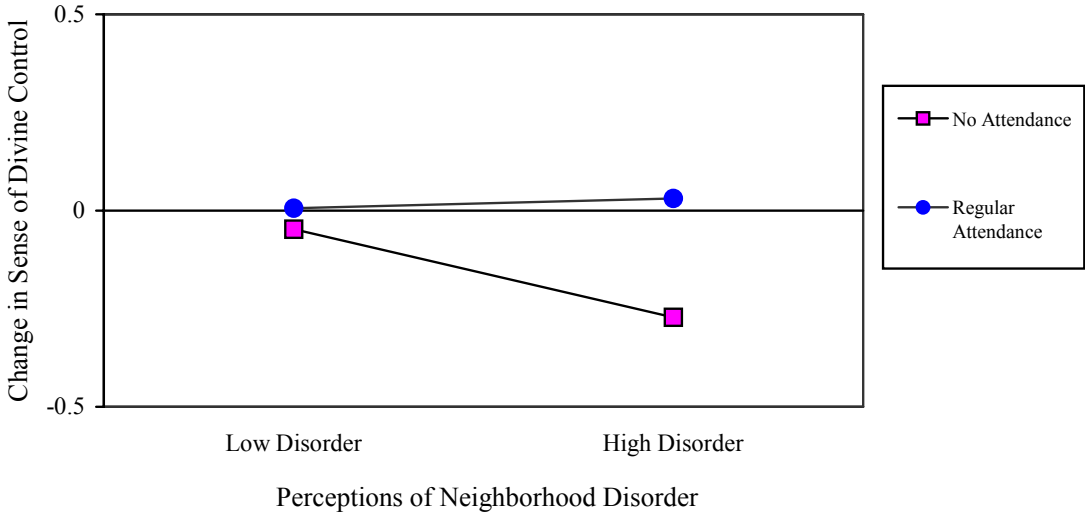


Figure 5. Effects of Neighborhood Disorder on Depression for Women

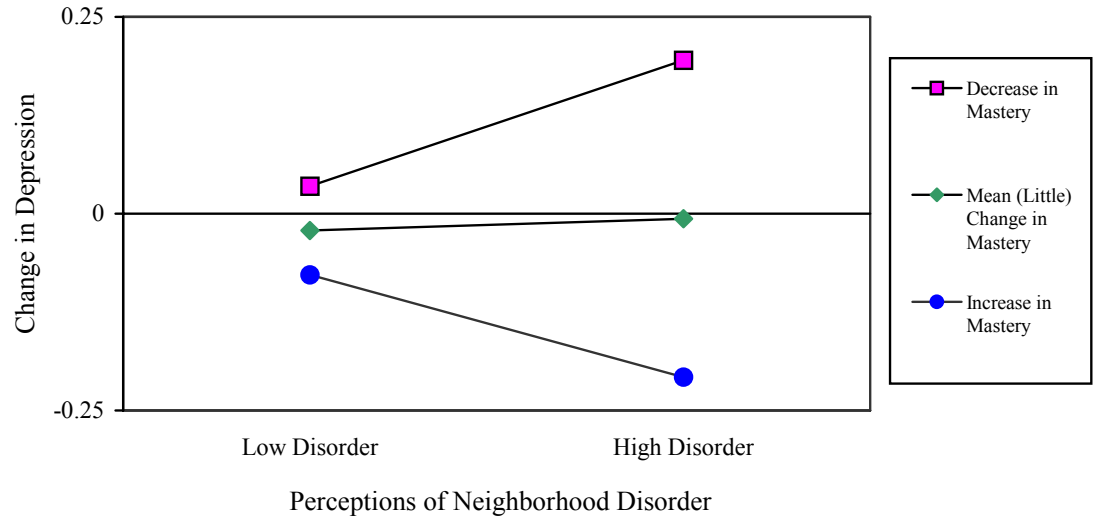


Figure 6. Effects of Neighborhood Disorder on Depression for Low Education Elders

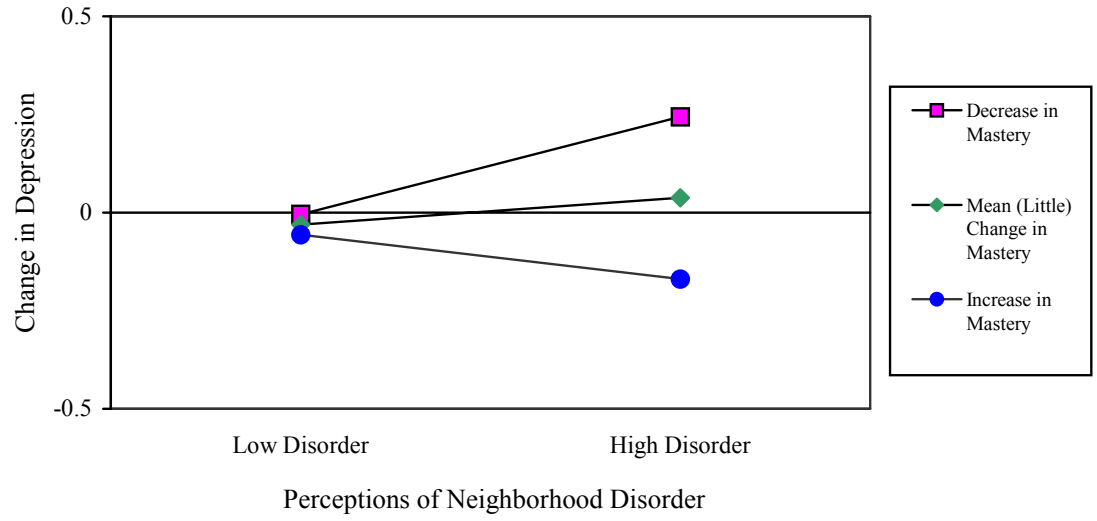
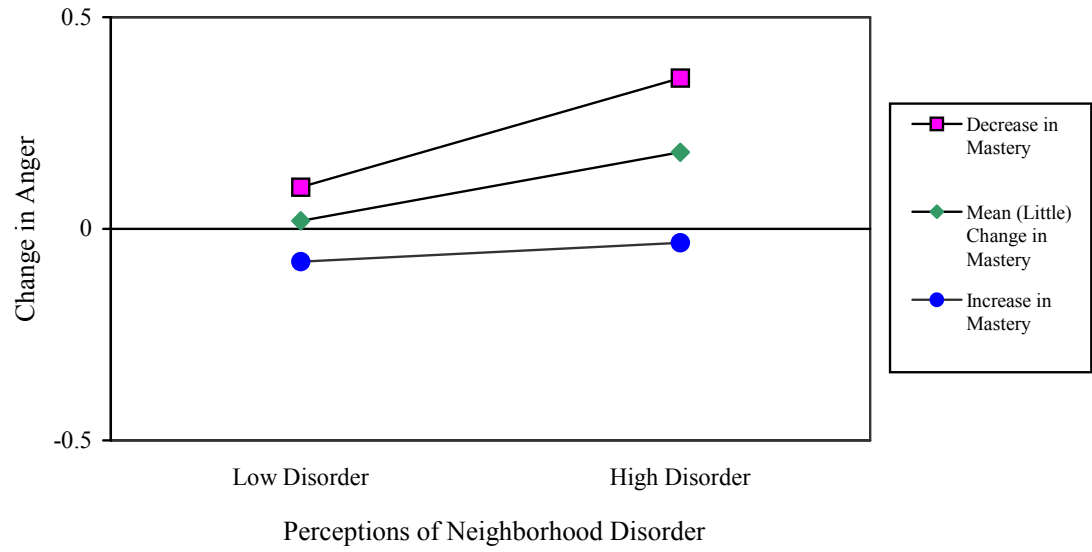


Figure 7. Effects of Neighborhood Disorder on Anger for Low Education Elders



APPENDIX A
 Probit Examining Baseline Influences on Remaining in
 Sample Between Wave 1 and Wave 3

Perceived Disorder	-0.135
Married	0.044
Frequency of Religious Attendance	0.013
Frequency of Prayer	-0.020
Prayer Flag	-0.221
Gender	0.051
Race	0.098
Education	0.038
Wave 1 Depression	0.097
Wave 1 Anger	0.066
Wave 1 Mastery	0.295 *
Wave 1 Sense of Divine Control	0.034
Age	-0.021 **
Time in Marital Status	-0.001
Living Child	0.315 *
Ever Separated or Divorced	-0.052
Time in Neighborhood	0.004
Number of People in Home	-0.095 *
People in Home Flag	0.140
Providing Spousal Caregiving	-0.066
Providing Childcare	0.119
Organizational Meeting Attendance	-0.045
Frequency of Visits	0.028
Frequency of Talking on Phone	0.039
Frequency of Volunteering	0.028
Frequency of Attending Theater	-0.007
Financial Strain	-0.002
Working	0.264 *
Physical Limitations	-0.135
Wave 1 Anxiety	0.081
Illness Symptoms	-0.044
Fair Understanding of Questions	-0.557 **
Poor Understanding of Questions	-1.238 **
Missing on Understanding of Questions	-0.004
Constant	1.929
Pseudo-R ²	0.093
Likelihood Ratio χ^2	101.310

* p < .05. **p < .01. ***p < .001.

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