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Demonstrating Translational Research for Mental Health Services: An Example From Stigma Research

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In seeking to understand how the goal of providing efficient and effective mental health services can best be attained, services researchers have developed principles and methods that distinguish it from other research approaches. In 2000, the National Institute of Mental Health called for translational research paradigms that seek to expand the conceptual and methodological base of mental health services with knowledge gained from basic behavioral sciences such as cognitive, developmental, and social psychology. The goal of this paper is to enter the discussion of what is translational research by illustrating a services research program of the Chicago Consortium for Stigma Research on mental illness stigma. Our research strives to explain the prejudice and discrimination that some landlords and employers show toward people with mental illness in terms of basic research from social psychology and contextual sociology. We end the paper with a discussion of the implications of this research approach for the very practical issues of trying to change mental illness stigma.

KEY WORDS: translational research; mental health services research; employment discrimination; housing discrimination; mental illness; stigma.

Parties with interests in mental health treatments in the public arena have pushed the research agenda from a traditional focus on clinical trials and efficacy research to a concentration on real-world services and applied outcomes. In the process, a distinct research paradigm has developed to drive services research. In this paper, we explore how the services research agenda can be furthered by a translational research paradigm. Translational research seeks to advance applied goals by incorporating theories, findings, or methodologies drawn from basic behavioral science. We begin this paper with a review of the goals of mental health services research. We then highlight ways in which the services' agenda is advanced through translational partnerships with basic research in psychology and the other social sciences. One way to illustrate the power of translational research is with an example. Hence, the major goal of this paper is to illustrate the benefits of a translational research agenda on an important services research phenomenon: mental illness stigma. Efforts of the Chicago Consortium for Stigma Research are presented as an example. Bridging stigma concerns with basic social psychological and sociological research that has been conducted on other minority groups (e.g., people of color, women, gay men, and lesbians) has provided Consortium researchers a fruitful theoretical base and methodology for better understanding mental illness stigma. A review of one research program in our portfolio in this area is provided as an example of translational research.

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WHAT TRANSLATIONAL APPROACHES ADD TO SERVICES RESEARCH

Service providers, administrators, and policy makers have an overwhelming task: to identify and implement intervention strategies that meet the needs of the diverse population of people with mental health problems. This task is even greater when efforts are focused on priority groups like children and adults with serious mental illness and psychiatric disabilities. Providers and policy makers turn to services researchers for answers to such practical questions as: Which services work best for what consumers in which settings? More to the point, will service *A* work in community settings with limited resources? What are the contextual or society-level variables that augment and obstruct service benefits? (Essock, 1999; Lehman, et al., 1998; Mechanic, 1996).

When addressing these questions, multidisciplinary teams are necessary; public health experts, economists, sociologists, anthropologists, and epidemiologists join the more traditional behavioral and clinical scientists to identify evidence-based practices that will be successful in the real world. Given this kind of interdisciplinary approach, mental health services researchers naturally seem open to translating the wisdoms of multiple approaches into comprehensive research protocols. The National Advisory Mental Health Council (NAMHC) of the National Institute for Mental Health gave voice to this wisdom in two reports released during the past few years. In "Bridging Science and Service" (National Institute for Mental Health [NIMH], 1998), the NAMHC noted the importance of addressing what are fundamentally services research concerns with bridges to more fundamental approaches to understanding psychiatric illness and corresponding treatment. The goals of translational research were more clearly described in a subsequent report, "Translating Behavioral Science into Action" (NIMH, 2000). The report provides a multidimensional definition of basic or fundamental research which includes three categories:

1. research on behavioral and social processes: the study of human or animal functioning at the level of the individual, small group, institution, or community;
2. biopsychosocial research: the study of the interactions of biological factors with behavior or social variables and how they affect each other; and
3. research on the development of behavioral or social procedures for measurement and analysis: the development and refinement of procedures for measuring behavior, psychological functioning, or the social environment.

The report's authors noted that basic behavioral sciences have greatly advanced in such applied areas as education, industry, and the military. Lamentably, mental health services have not yet significantly benefited from a marriage with behavioral science. Toward this end, the NAMHC report posed two questions as a mission: How might behavioral science inform research on etiology, diagnosis, treatment, and prevention of psychiatric disorders? and, of specific interest to this paper, How might basic behavioral science inform research on the accessibility, quality, and delivery of mental health services?

Translational research is not a new idea; clinical medicine has embraced it for decades (Baumann et al., 2001; Campbell, Weissman, Moy & Blumenthal, 2001). The goal in medicine is to shepherd research from basic investigations—in vitro studies, animal experiments, biomathematical modeling—to more clinical studies—Phase I and II trials, and randomized Phase III research. The challenge was for geneticists, physiologists, cell biologists, biochemists, and others to partner with clinicians and improve the quality of diagnosis and treatment. The NIMH has put out a similar challenge for basic behavioral and social scientists; namely, use fundamental theory and research methods to improve what is known about psychopathology and how to treat it. In doing so, researchers must be mindful of the practical exigencies of services in the real world. Hence, there is a clear need for bridges between services research and the wisdoms of basic behavioral investigations. The potential of translational research has clearly been realized in clinical medicine. Now basic behavioral and clinical services researchers are partnering to achieve similar accomplishments in mental health.

A CASE EXAMPLE: TRANSLATIONAL RESEARCH AND MENTAL ILLNESS STIGMA

The central goal of mental health services research is to describe the problems of mental health, and the services that address these problems, given the exigencies of the social world in which they are to be implemented. In two recent reports, the Surgeon General highlighted a major barrier to accessing mental health services and to the realization of mental

health goals: mental illness stigma (U.S. Department of Health and Human Services, 1999, 2001). The general public is unwilling to seek mental health treatment and risk the stigma that accompanies the label: "He's crazy cause he sees a psychologist!" Moreover, research reported later indicates that many people with psychiatric disabilities are unable to accomplish life goals because of mental illness stigma; for example, landlords often will not rent to people who have been hospitalized because they are perceived to be dangerous and could hurt other tenants. The Surgeon General asserted that research on mental illness stigma is essential to open up mental health services for those who are victimized by prejudice and discrimination. Unfortunately, past research by psychologists in this area has been largely descriptive (Penn, Guynan, Daily, & Spaulding, 1994; Penn, Kommana, Mansfield, & Link, 1999; Wahl, 1999) except for an early set of studies completed by Amerigo Farina (reviewed in Farina, 1998) that looked at the implications of self-fulfilling prophecies. Farina's work shows the benefits of conceptualizing an important services question from the standpoint of a basic model of human behavior.

With this in mind, a group of researchers in the Chicago area met to tackle problems related to stigma in 1998. We formalized our efforts with an NIMH infrastructure grant and became the Chicago Consortium for Stigma Research in October 2000. The Consortium represents the efforts of 25 basic behavior and clinical/services researchers from six Chicago universities and the National Opinion Research Center (NORC). Among the dozen projects currently active at the Consortium is a study on the stigma of mental illness in some landlords and employers.

Mental health services researchers recognize that two key outcomes of effective treatment for adults with serious mental illness are gainful employment and independent housing. In part, people with psychiatric disabilities are unable to return to work or live independently because of the residual symptoms and dysfunctions that result from their mental illness (Corrigan, 2001). However, research also suggests that stigma can prevent many people who are capable of independent work and housing from attaining these goals. Several studies have documented the public's widespread endorsement of stigmatizing attitudes (Bhugra, 1989; Brockington, Hall, Levings, & Murphy, 1993; Greenley, 1984; Hamre, Dahl, & Malt, 1994; Link, 1987; Madianos, Madianou, Vlachonikolis, & Stefanis, 1987; Rabkin, 1974; Roman & Floyd, 1981). These attitudes have a deleterious impact on obtaining good jobs (Bordieri & Drehmer, 1986; Farina & Felner, 1973; Link, 1982, 1987; Olshansky, Grob, & Ekdahl, 1960; Wahl, 1999; Webber & Orcutt, 1984) and leasing safe housing (Aviram & Segal, 1973; Farina, Thaw, Lovern, & Mangone, 1974; Hogan, 1985a, 1985b; Page, 1977, 1983, 1995; Segal, Baumohl, & Moyles, 1980; Wahl, 1999).

We believed a translational research model might advance our understanding of stigma and its impact on the work and housing setting. In particular, we felt that insights from basic social psychology and contextual sociology might provide answers to four questions relevant to the impact of mental illness stigma:

1. How does stigma affect landlord and employer decisions?
2. Are these decisions the result of a deliberative process or automatic?
3. Are landlord and employer reactions to people with mental illness univalent or ambivalent?
4. How does the decision process vary by social context?

Landlord/Employer Decision Making as Social–Cognitive Process

Social–cognitive theories provide a useful approach for understanding mental illness stigma and decision making because they yield a broad conceptual base and rigorous research methodology that have been tested in previous investigations (Augoustinos, Ahrens, & Innes, 1995; Bodenhausen, Macrae, & Hugenberg, in press; Esses, Haddock, & Zanna, 1994; Hilton & von Hippel, 1996; Judd & Park, 1993; Krueger, 1996; Mullen, Rozell, & Johnson, 1996). Prominent among these social cognitive views is *attribution theory*. Fundamentally a model of human motivation and emotion, it is based on the assumption that individuals search for causal understanding of everyday life events (Weiner, 1980, 1983, 1985, 1993, 1995). "Why did I get a pay raise?" Meeting a person with mental illness may yield a particularly influential causal search: "Why can't that mentally ill person care for himself?" Weiner classifies the causes that arise in these analyses into three dimensions: locus of the cause (internal vs. external), stability of the cause (transitory vs. enduring), and controllability of the cause (controllable vs. uncontrollable; see Weiner, 1993,

1995). Controllability attributions are particularly relevant for outlining the relationship between stigmatizing attitudes and discriminatory behavior and became the focus or our work.

Controllability refers to the amount of volitional influence an individual exerts over a cause (Weiner, 1985, 1993, 1995). Persons are likely to ascribe responsibility and blame events that are viewed as personally controllable. For example, a landlord is likely to blame people with mental illness more when they believe the illness results from an internal controllable attribution like "poor moral character" (Corrigan & Watson, in press). Weiner's theory suggests that controllability and responsibility attributions yield characteristic emotional responses. Persons who are viewed to be in control of a negative behavior or outcome (e.g., the symptoms of schizophrenia) are more likely to be held responsible and to elicit angry reactions (Dooley, 1995; Graham, Weiner, & Zucker, 1997; Reisenzein, 1986; Rush, 1998; Schmidt & Weiner, 1988; Weiner, Graham, & Chandler, 1982; Weiner, Perry, & Magnusson, 1988). Conversely, individuals who are not believed to be in control of a negative behavior or outcome are pitied by others (Dooley, 1995; Reisenzein, 1986; Schmidt & Weiner, 1988; Weiner et al., 1982, 1988).

Additional research on attribution theory has examined the relationship between attribution, affective response, and behavioral activity. Uncontrollability attributions about an event lead not merely to pity, but also to helping behavior (Dooley, 1995; Menec & Perry, 1998; Reisenzein, 1986; Schmidt & Weiner, 1988; Zucker & Weiner, 1993). For example, persons whose mental illness is attributed to a head injury sustained in a car accident are more likely to receive sympathy from others. This sympathy is likely to lead to helping behavior; "I'd be willing to give him a ride to work." Of far greater importance to the question of interest here, research also shows a relationship between attributions about events perceived to be under a person's control, angry reactions, and *punishing* behaviors (Graham et al., 1997; Graham, Hudley, & Williams, 1992; Reisenzein, 1986). Persons who believe that a mental illness is under an individual's control (e.g., he is psychotic because he lacks willpower) are likely to respond angrily to that individual and act toward him or her in a punishing manner. A punitive response to controllability attributions may involve loss of opportunity for the stigmatized target; namely, landlords and employers might withhold opportunities from an individual because of his or her perceived responsibility for psychiatric symptoms. These reactions might include withholding opportunities for competitive jobs and good housing (Corrigan, 1998).

Aspects of Weiner's attribution model have already been transported to studies related to mental illness. For example, research has examined whether the theorized connections among signaling events, attributions, emotional responses, and behavioral reactions applies to the domain of mental health stigmas. Results have confirmed significant associations between controllability attributions about mental illness and two emotional reactions: anger and pity (Corrigan et al., 2001, in press; Lin, 1993; Menec & Perry, 1998; Schwarzer & Weiner, 1991; Weiner, Perry, & Magnusson, 1988). As expected, people tend to respond angrily to individuals who are believed to be in control of their symptoms; however, they pity persons who are believed to be victim to their symptoms and not in control. Research has also supported the relationship between pity toward mental illness and helping behavior (Corrigan et al., 2000; Lin, 1993; Menec & Perry, 1998; Weiner et al., 1988). Far fewer studies examined the relationship between mental illness attributions, affective response, and punishing behaviors (Farina, Holland, & Ring, 1966). This is an especially important causal path because it describes the cognitive and emotional antecedents to the discriminatory behavior observed in some landlords and employers.

Deliberate Versus Automatic Decision Making

Many social–cognitive models like attribution theory cast decision makers (landlords and employers) as deliberative agents who consciously weigh the factors that influence their attitudes, affect, and behaviors (Fishbein & Azjen, 1975; Heider, 1958; Kelley, 1967). Moreover, framing behaviors related to hiring and renting as controlled cognitive processes makes sense; employers and landlords must make important decisions frequently based on relatively novel information that arises during an interview. However, rather than always being a controlled and effortful process, research suggests that the influence of attitudes on behaviors and decisions may also be relatively automatic and implicit (Ajzen & Fishbein, 2000; Devine, 1989; Devine & Monteith, 1999; Fazio & Towles-Schwen, 1999). Fazio (1990, 1995) has developed a model for discerning when the relationship between attitudes and behaviors is an automatic or controlled processed called the MODE model: Motivation and Opportunity as DEterminants of attitude to behavior processes.

According to Fazio, individuals who experience sufficient motivation and are provided ample opportunity tend to use deliberative processes to guide behavior. For example, when the consequences of a decision have strong personal relevance (e.g., because they affect the quality of one's own outcomes), or when others are expected to scrutinize and evaluate the quality of one's decisions (i.e., high accountability), epistemic motivation is likely to be high. In such circumstances, behavior is expected to be guided by a thoughtful analysis of one's options. However, the nature of the deliberations may differ, depending on whether one's motivation stems from high personal relevance versus high accountability to others. Consider the case of an employer contemplating the possibility of hiring a person with a history of serious mental illness. A deliberative analysis motivated by the personal relevance of the situation should lead to an appraisal of the costs and benefits of having employees with mental illness. Employers who possess the standard stigmatizing attitudes of the culture are likely to form a negative attitude toward hiring the individual based on their stereotypic assumptions about the costs associated with the presumed low competence of persons with mental illness. In contrast, a deliberative analysis that is motivated by accountability concerns may lead to a different outcome if the external authorities to whom one is held accountable are expected to favor a positive response. For example, if the employer knows that his or her decisions will be scrutinized from the standpoint of fairness and adherence to the principle of equal opportunity, then deliberative processing may be biased toward the more socially desirable outcome of hiring the person with a mental illness history (see Chen & Chaiken, 1999).

Although high levels of motivation are considered necessary for deliberative processing to occur, they are not in and of themselves sufficient to guarantee such processing. Opportunity is also necessary (e.g., Fazio & Towles-Schwen, 1999). That is, the social perceiver must have sufficient attentional capacity in order to engage in effortful deliberation (Devine & Monteith, 1999; Pendry & Macrae, 1994); the presence of distraction, time pressure, or other constraints on free attention can effectively prevent a decision maker from deliberative processing (Fazio & Towles-Schwen, 1999; Jamieson & Zanna, 1989; Sherman, Macrae, & Bodenhausen, 2000).

In the absence of motivation and opportunity, preexisting attitudes will govern people's judgments and behavior via relatively automatic responses (Fazio, 1990, 1995). This notion recapitulates the constructive nature of perceptions (Bruner, 1957); namely, attitudes influence perceptions that in turn affect behavior. Specifically, positive perceptions about a group lead to approach behaviors (e.g., social interaction and help) and negative perceptions (like stigma) yield avoidance behavior (like not renting or hiring). Attitudes have detectable effects on behavior only when they are accessible in memory (Banaji & Greenwald, 1994, 1995; Fazio & Towles-Schwen, 1999). Attitude accessibility has been associated, for example, with interracial friendliness and interpersonal behavior (Dovidio, Kawakami, Johnson, Johnson, & Howard, 1997; Fazio, Jackson, Dunton, & Williams, 1995) as well as interracial evaluations (Jackson, 1997).

Rather than being seen as mutually exclusive ways of responding, deliberative and spontaneous modes of social cognition have been integrated in recent theoretical treatments (Bargh, 1994; Chen & Chaiken, 1999; Devine & Monteith, 1999). A dual process model (Fazio & Towles-Schwen, 1999) shows how motivation, opportunity, and attitude accessibility might interact with the components of Weiner's attribution model. Landlords and employers who are provided motivation and opportunity should consider whether the applicant is responsible for his or her mental illness. The attribution they make should then lead to anger or pity, followed by punishment or help. In the absence of motivation and opportunity, however, accessible negative attitudes about mental illness may spontaneously lead to social distance between people with mental illness and landlords/employers. The nature of the decision maker's automatic attitudes would also be expected to influence anger and pity.

Ambivalent Reactions to Mental Illness

Weiner's attribution theory (Weiner, 1995) presents a relatively coherent picture of the connections among attributions, affect, and behavioral responses. Depending on the form of the responsibility attribution, members of the general public are expected to view persons with mental illness with either sympathy *or* anger. This model is consistent with research where attitudes are generally treated as bipolar constructs falling somewhere on a single, positive–negative dimension. It has long been recognized, however, that attitudes toward a given group or behavior are often more complex than that (Kaplan, 1972) because they consist of both positive and negative feelings toward the same entity

(Cacioppo, Gardner, & Bernsen, 1997; Gaertner & Dovidio, 1986; Priester & Petty, 1996; Thompson, Zanna, & Griffin, 1995). Many people's attitudes toward hiring or renting to people with psychiatric disabilities may similarly be characterized by ambivalence. For example, renting to or hiring such people might be perceived as risky; but at the same time, many landlords/employers would like to see themselves as fair and open-minded.

What effect do ambivalent attitudes have on one's reactions to the target of one's ambivalence? On one hand, ambivalent emotions might lead to a middle-of-the-road response (Bagozzi, 1989). Consider the landlord who empathizes with people with mental illness but is also concerned about letting a "potentially dangerous" person move into his/her building. These positive and negative feelings might effectively cancel each other, thereby leading to a middle-of-the-road response: neither patently punitive (angrily turning the person away from an interview) nor unusually accommodating (providing the necessary supports so the person can rent the apartment). In this case, ambivalent landlords might be willing to show the apartment to the prospective renter with mental illness but fail to follow through with leasing the apartment to him or her.

On the other hand, ambivalence can lead to paradoxically *extreme* reactions and evaluations (Hass, Katz, Rizzo, & Bailey, 1991; Katz, Hass, & Bailey, 1988; Katz, Wackenhut, & Hass, 1986). If cues exist that activate a conflicted attitude toward a stigmatized group (e.g., mental illness), then members of the general public will experience psychological tension and discomfort. Efforts at tension reduction may polarize reactions to members of the target group and lead to amplified reactions. In the presence of a generally positive interaction with a member of the ambivalently evaluated group, an individual's response will be significantly more favorable than to a nonambivalent counterpart. Negative interactions, however, can lead to amplified unfavorable responses. From this perspective, one would expect the ambivalent employer with conflicted attitudes about mental illness who has a negative interaction with an applicant labeled "mentally ill" to respond more negatively than to a "normal" applicant.

Decision Making in Context

The power of our social–cognitive explanations is further enhanced by integrating two sets of contextual variables into the mix (Liska, 1990). First, we consider the *social–demographic context* of landlords and employers by including the gender, race, and age of participants in the model. Research has shown that cultural characteristics and other key demographics of the observer interact with cognition of outgroup members (Triandis, 2000). For example, results of one study suggest that Whites, compared to members of ethnic minorities, report lower perceptions of violence among people with mental illness (Phelan, Link, Stueve, & Pescosolido, 2000). Moreover, increased age and income are associated with a greater degree of social distance/rejection (Link & Cullen 1986; Martin, Pescosolido, & Tuch, 2000; Schnittker 2000).

How do these specific findings relate to a broader theory about the interaction of culture and social–cognitive phenomena? One interaction may be understood in terms of a cultural version of the fundamental attribution error. People from Western, individualistic cultures are more likely to assume that behavior is a product of internal qualities of the actor, while people from Eastern, collectivistic cultures are more likely to assume that behavior is a product of environmental forces or circumstances (Choi, Nisbett, & Norenzayan, 1999). Given that African American and Latino subcultures are more collectivistic than the dominant European American view, the ethnicity of decision makers may influence how likely they are to view people with mental illness as personally responsible for their problems. Gender may interact with social–cognitive variables in a different way. Research suggests that women are less prone to experience anger and show punitive responses than men (Gault & Sabini, 2000). If so, then the affective and behavioral outcome variables in the theoretical model of landlord/employer stigma should covary with gender. There is a complication to this hypothesis, however: female decision makers participating in this study act in traditionally masculine (agentic) roles. It may be that the demands of the social role, rather than biological sex per se, dictate the cognitive and emotional tendencies of the decision maker (cf. Eagly, 1987). Nevertheless, the reasoning above makes a *prima facie* case that observer gender is an important contextual factor worth investigating.

Second, the *social–economic context* in which employers and landlords operate may affect the likelihood of hiring/renting to people with mental illness beyond the stereotypes of those doing the hiring/renting. Some studies suggest that persons discharged from psychiatric hospitals often find housing in less desirable parts of cities, sometimes called "socially disorganized" neighborhoods (Silver, 1999, 2000). So-

cial disorganization theory and research on urban ecology suggests that this occurs because some communities are less politically active and hence, unable to resist the placement of low-income housing, group homes, and single-room occupancy hotels (Bursik & Grasmick, 1993; Sampson & Groves, 1989; Shaw & McKay, 1942). Neighborhood disorganization results, in large part, from "concentrated disadvantage" as reflected by the proportion of low-income, unemployed, single-female-headed households, and racial minorities located in the neighborhood (Sampson, Raudenbush, & Earls, 1997).

The likelihood of landlords renting to persons with mental illness may depend on the economic context of the neighborhood in which the apartment is located. Landlords in more desirable parts of the city may conform to norms regarding the "appropriateness" of certain tenants. However, landlords in more economically disadvantaged and less desirable parts of the city may not be under community pressure to restrict their rentals or may be more willing to absorb tenants of lower income by virtue of their location, beyond their beliefs about the causes and consequences of mental illness. A similar pattern is expected in terms of hiring. In the event of multiple applicants, employers will be more likely to discriminate such that deliberative processes may affect results. These processes may be moderated depending on the ratio of renters to apartments or of employees to jobs that differ by economic conditions. When housing is tight or jobs are scarce, discrimination may be more pronounced because more renters/employees per housing unit/job are available. If, on the other hand, housing or jobs are plentiful then constraints on those with a mental illness may be less in either or both settings.

IMPLICATIONS FOR SERVICES: MOVING TOWARD STIGMA CHANGE

By partnering with basic social psychological research, we were able to develop a comprehensive model of how important decision makers in the lives of people with psychiatric disability—landlords and employers—react to stereotypes about mental illness. However, the ultimate proof of success in translational endeavors is how a research model like the one illustrated here yields concrete and meaningful suggestions for affecting services. There have been several attempts to change public stigma in order to meet this goal, largely focusing on education and protest programs (Corrigan & Penn, 1999). Few of these programs have been informed by careful research that outlines strategies that yield effective attitude and behavior change. How might the translational model discussed in this paper inform the development of future antistigma programs specific to landlords and employers?

The distinction between deliberative attributional processes and more automatic processing will have important implications for stigma change strategies. Researchers have argued that relatively controlled antistigma programs like education have immediate effects on deliberative processes but very little impact on automatic processes (Ottati, Mea, Coats, DeCoster, & Smith, 2000a, 2000b). Findings from our translational model about the relative impact of deliberative and automatic processes will influence the selection of antistigma programs. Deliberative processes are influenced by motivating conditions and opportunities (Fazio, 1990, 1995). Results from this study will identify potent motivators (e.g., ADA proscriptions vs. job coach support for employers) and practical opportunities. Researchers have argued that stigma arising from automatic processes can be diminished by making the unconscious conscious (e.g., Monteith, 1993; Monteith & Voils, 2001). One way to do this is by combining self-assessment with self-regulation; have people compare an implicit measure that suggests the presence of prejudice to an explicit measure where such prejudice is not obvious (Monteith, 1993). It is aversive to find out that one's actual level of prejudice exceeds one's personal standard. People may change their prejudicial views to reconcile the difference and avoid this consequence in the future.

Showing that interactions with stigmatized individuals are characterized by ambivalence may also have implications for educational approaches. Such findings indicate that reactions to people with mental illness could show a great deal of temporal and cross-situational instability. Behaviors and decisions would be affected by the goals and standards that were salient in a given situation, which in turn would affect how people evaluated the desirability of the options available to them. Designing effective educational programs would require understanding the cognitive underpinnings of that ambivalence, and understanding the contextual variables that could make different responses more likely.

Finally, showing that stigma varies by context will affect antistigma programs. In particular, we expect social disorganization theory (Silver, 1999, 2000) to be supported and landlords/employers to be less discriminating in economically depressed areas. Given

that poverty covaries with ethnicity, this finding will have significant impact on the specific form of anti-stigma programs in various communities.

The research program outlined here generates a broad and fruitful heuristic for advancing our understanding about how to change public stigma. This program was made possible by a bridge between basic and services research interests. We expect similar joint ventures will significantly enhance our understanding of ways to best serve people with serious mental illness in the public forum.

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