Mental Health Stigma as Social Attribution: Implications for Research Methods and Attitude Change

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The course and outcomes of mental illness are hampered by stigma and discrimination. Research on controllability attributions has mapped the relationships between signaling events, mediating stigma, emotional reactions, and discriminating behavior. In this article, I describe how an attribution model advances research questions related to mental health stigma in three areas. (1) Stigma research needs to examine signaling events related to psychiatric stigma including the label of mental illness, behaviors associated with psychiatric symptoms, and physical appearance. (2) Research into mediating knowledge structures needs to bridge information about controllability attributions with public attitudes about dangerousness and self-care. (3) Ways in which these knowledge structures lead to emotional reactions (pity, anger, and fear) as well as behavioral responses (helping and punishing behaviors) need to be examined. The attribution model has significant implications for social change strategies that seek to decrease mental illness stigma and discrimination.

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Severe mental illness strikes with a two-edged sword. On one hand, the symptoms and skill deficits that arise from psychiatric *disease* interfere with achieving many social roles, work and independent living opportunities consistent with these social roles, and quality of life (Corrigan &


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Penn, 1997). On the other, societal reaction to severe mental illness results in *stigma and discrimination* that unjustly impede the person with psychiatric disability[1] from attaining work, affiliation, and other independent living opportunities. Clinical psychology and other disciplines have developed and evaluated psychopharmacological and rehabilitation strategies that successfully address psychiatric disease and its sequelae. However, addressing the disease is not sufficient to improve the course of severe mental illness; societal stigma and discrimination must also be remediated.

Although clinical disciplines have been noticeably remiss in developing and evaluating strategies for changing stigma and discrimination, social psychologists, especially those working in social cognition, have developed and tested several models relevant to understanding and changing stigma. The purpose of this article is to review one such model—attribution theory—and its implications for changing societal attitudes as well as evaluating these change strategies. Attribution theory is an especially appealing model for understanding and changing stigma because path models developed from this theory have mapped the relationship among signaling events, mediating knowledge structures (attributions), emotional reactions, and behavioral responses. Before reviewing attribution theory, the extent of problems caused by mental health stigma is considered.

THE PROBLEM OF MENTAL HEALTH STIGMA

Stigmas about mental illness seem to be widely endorsed by the general public. Studies suggest that many citizens in the United States (Corrigan, River, Ludin, Wasowski, Campion, Mathisen, Goldstein, Bergman et al., in press; Link, 1987; Rabkin, 1974; Roman & Floyd, 1981), and most Western nations (Bhugra, 1989; Brockington, Hall,
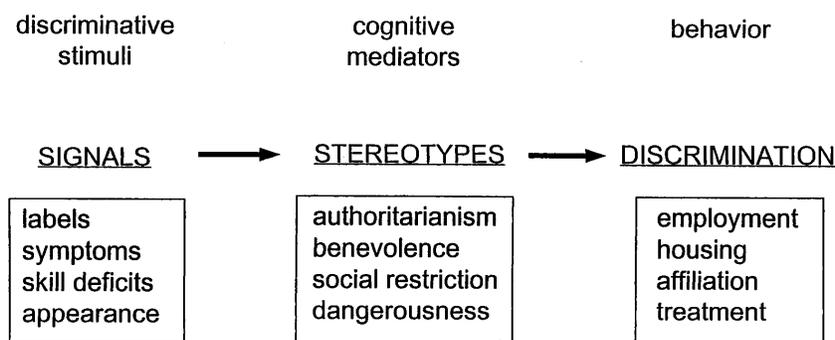
Figure 1. The relationship between stigma signals (cues), stereotypes (attitudes), and behaviors (discrimination).

Levings, & Murphy, 1993; Greenley, 1984; Hamre, Dahl, & Malt, 1994; Madianos, Madianou, Vlachoni-kolis, & Stefanis, 1987), endorse stigmatizing attitudes about mental illness. Stigmatizing views about mental illness do not seem to be limited to uninformed members of the general public. Research has shown that well-trained professionals from most mental health disciplines also subscribe to stereotypes about mental illness (Keane, 1990; Lyons & Ziviani, 1995; Mirabi, Weinman, Magnetti, & Keppler, 1985; Page, 1980; Scott & Philip, 1985).

Researchers have identified three paradigms that attempt to explain the prominence of stigma: sociocultural perspectives (i.e., stigmas develop to justify existing social injustices), motivational biases (stigmas develop to meet basic psychological needs), and social cognitive theories (stigmas are the products of processing human knowledge structures) (Corrigan, 1998; Crocker & Lutsky, 1986). Social cognitive paradigms are especially promising because they provide a broad theoretical base, rigorous research methodology, and empirically tested intervention approach for understanding and changing stigma at the societal level (Augoustinos & Ahrens, 1994; Esses, Haddock, & Zanna, 1994; Hilton & von Hippel, 1996; Judd & Park, 1993; Krueger, 1996; Mullen, Rozell, & Johnson, 1996). Research on mental health stigma might be organized into a social cognitive paradigm like the one in Figure 1. This model seeks to explain the relationship between discriminative stimuli and consequent behavior by identifying the cognitions that mediate these constructs. Before discussing attribution theory as one example of social cognition, the generic form of the paradigm—discriminative stimuli → cognitive mediators → behavioral responses—is applied to mental health stigma.

In a simple version of the social cognitive model, persons with severe mental illness signal the public about their mental illness, for example, "that person talking to himself on the park bench must be crazy." These signals yield stereotypes about persons with mental illness: "crazy people are dangerous." Stereotypes lead to behavioral reactions or discrimination, for example, "I'm not going to allow dangerous people like that move into my neighborhood." Let us take a closer look at each of the elements of this model.

Signals That Lead to Stigma

Goffman (1963) suggested that cues which signal stigma may not be readily apparent; he illustrated this point by distinguishing discredited from discreditable kinds of stigma. Examples of the discredited group include persons from a cultural minority with an apparent physical trait that leads them to believe that their differentness is obvious to the public, for example, Africans have dark skin. Persons with discreditable stigma, on the other hand, can hide their condition; they have no readily manifest mark that identifies them as part of a stigmatized group. The public cannot determine whether persons are mentally ill by looking at them. Citizens must infer mental illness from four signals: labels, psychiatric symptoms, social skills deficits, and physical appearance (Penn & Martin, 1998).

According to labeling theory, persons who are called mentally ill, or are otherwise known to have such a label (e.g., being observed coming out of a psychiatrist's office), are the object of stigma and discrimination (Link, 1987; Scheff, 1974). Link (1982), for example, found that persons who were publicly labeled "mentally ill" had less income and were more likely to be underemployed compared to a similarly impaired, but unlabeled, group. Critics have countered labeling theory by arguing that aberrant behavior, and not the label per se, is the source

of negative responses from the public (Gove, 1982; Huffine & Clausen, 1979; Lehman, Jay, Kreisman, & Simmens, 1976). Link (1987) tested this opposing view in an experiment where label and aberrant behavior were manipulated; results showed citizens were likely to stigmatize a person labeled mentally ill even in the absence of any aberrant behavior. Link, Cullen, Frank, and Wozniak (1987) and Link, Cullen, Struening, Shrout, and Dohrenwend (1989) posed a modified labeling theory where they concluded that although a psychiatric label does not lead to mental illness, it certainly is associated with negative societal reactions that, in turn, exacerbate the course of the person's disorder.

Another set of signals that may lead to stigma result from the way people act. Many of the symptoms of severe mental illness—inappropriate affect, bizarre behavior, language irregularities, and talking to self aloud—are manifest indicators of psychiatric illness that frighten the public. Research has shown that symptoms like these tend to produce more stigmatizing reactions than those associated with labels alone (Link et al., 1987; Penn et al., 1994; Socall & Holtgraves, 1992). Moreover, poor social skills that are a function of psychiatric illness also lead to stigmatizing reactions. Deficits in eye contact, body language, and choice of discussion topics (Bellack, Morrison, Wixted, & Mueser, 1990; Mueser, Bellack, Douglas, & Wade, 1991) potentially mark a person as mentally ill and lead to stigmatizing attitudes.

Finally, research suggests personal appearance may signal stigmatizing attitudes (Eagly, Ashmore, Makhijani, & Longo, 1991; Penn, Mueser, & Doonan, 1997). In particular, physical attractiveness and personal hygiene may be manifest indicators of mental illness leading to stereotypic responses from one's community, for example, "that unkempt person on the park bench must be a mental patient." Note, however, the potential for misattributing someone as mentally ill based on appearance. For example, many street people with slovenly appearance are believed to be mentally ill when, in actuality, they are poor and homeless (Koegel, 1992; Mowbray, 1985).

Stereotypes That Give Meaning to Signals

The four types of signals in Figure 1 are given meaning by mediating knowledge structures. Stereotypes are one kind of well-studied, knowledge structure that affects the meaning of signals. Analyses of film and print have identified three common misconceptions about mental illness

that represent these stereotypes: people with mental illness are homicidal maniacs who need to be feared; they have childlike perceptions of the world that should be marveled; or they are rebellious, free spirits (Farina, 1998; Gabbard & Gabbard, 1992; Hyler, Gabbard, & Schneider, 1991; Mayer & Barry, 1992; Wahl, 1995). Findings from these qualitative analyses are supported by factor analytic studies. Cohen and Struening (1962) identified three factors that described the attitudes of 1194 mental health personnel toward their patients: authoritarianism (the belief that persons with mental illness as a class are inferior to normals and therefore require coercive handling), benevolence (Christian kindness to unfortunates leading to parental treatment toward children), and social restrictiveness (distance persons from society because they are dangerous). Similar factors were subsequently found on large samples collected in Canada (Taylor & Dear, 1980), Britain (Brockington et al., 1993), Greece (Madianos et al., 1987), and Israel (Rahav, Streuning, & Andrews, 1984).

Researchers have viewed attitudes about dangerousness as key to understanding the other stereotypes, especially authoritarianism and social restrictiveness (Angermeyer & Matschinger, 1996; Brockington et al., 1993; Levey & Howells, 1995; Penn & Martin, 1998). Members of the general public view persons with mental illness as potentially violent and fear them. This kind of fear requires a central authority that may decide to restrict persons from their communities (e.g., hospitalize them). For example, research participants in an analog study who rated mental illness as more dangerous were more likely to reject a hypothetical "mental patient" (Link et al., 1987).

Discriminatory Behaviors That Result from Stereotypes

Stigmatizing attitudes may lead to discrimination against persons with mental illness. Citizens are less likely to hire persons who are labeled mentally ill (Bordieri & Drehmer, 1986; Farina & Felner, 1973; Link, 1982, 1987; Olshansky, Grob, & Ekdahl, 1960; Webber & Orcutt, 1984), less likely to lease them apartments (Farina et al., 1974; Page, 1977, 1983, 1995), and more likely to falsely press charges for violent crimes (Sosowsky, 1980; Steadman, 1981). Many mental health advocates also believe that stigmatizing attitudes lead to poor treatment (Deegan, 1990; Fisher, 1994). Mental health professionals who endorse authoritarian attitudes toward their clientele are likely to rob them of their power over treatment. As a result, coer-

cive treatments like outpatient commitment and court-ordered medication may be required in cases where they are not needed.

Heuristic Value and Empirical History of This Model

The model in Figure 1 relating signals, stereotypes, and discriminatory behavior is useful for organizing a large set of studies about mental health stigma. Moreover, it represents this information in a manner consistent with the social cognitive paradigm; namely, the influence of signals on behaviors is mediated by attitudes. Unfortunately, there is little direct evidence supporting the paths in this model, at least in terms of mental illness stigma. Weiner (1985, 1993, 1995), however, developed a social cognitive theory, well supported by research, that may adequately inform the model in Figure 1. I use his attributional model for evidence supporting the relationship between signals, stereotypes, and discrimination outlined in Figure 1.

ATTRIBUTION THEORY AND MENTAL HEALTH STIGMA

Attribution theory provides one of several social cognitive approaches to stigma that frame the phenomenon in terms of knowledge structures. As such, stigmas are viewed as phenomenal representations of the public's largely negative perceptions about persons with mental illness. These knowledge structures are especially efficient means of categorizing information about social groups (Esses et al., 1994; Judd & Park, 1993; Krueger, 1996; Mullen et al., 1996). They are considered "social" because they represent collectively agreed upon notions of groups of persons; they are "efficient" because people can quickly generate impressions and expectations of individuals who belong to a stereotyped group (Hamilton & Sherman, 1994; Nosofsky, Palmeri, & McKinley, 1994).

Several studies have examined knowledge structures (i.e., the general class of attitudes and attributions that influence perceptions of and opinions about illnesses) that represent public understanding about a variety of physical and psychiatric disease groups. Typically, these studies identify attitudinal dimensions related to illness by applying factor analytic or multidimensional scaling techniques to responses of research participants asked to rate a disease group on specific scales. Examples of research in this area are summarized in Table 1. The sum total of research is interesting both for the prevalence of certain dimensions and for the relative absence of several themes.

Table 1. Attitude dimensions identified in six studies of public understanding about disease

Dimension	Definition	Study
Severity	The degree to which the disease affects morbidity and quality of life	Kerrick, 1969 D'Andrade et al., 1972 Turk et al., 1986 Crandall & Moriarity, 1995
Contagion	Whether the diesase can be obtained from others, and whether the person needs to be careful that they do not transmit it to others	D'Andrade et al., 1972
Child/adult	Whether the disease is characteristic of children and adults	D'Andrade et al., 1972
Avoidable/ responsible/ controllable	A group of diversely named dimensions that represent the person's responsibility for catching and coping with the disease	Kerrick, 1969 Turk et al., 1986 Long, 1990
Stable	Whether the disease will change over time and is amenable to treatment	Turk et al., 1986
Physical/ psychological-behavioral	Whether the diesase is primarily physical (i.e., cancer or heart disease) or psychiatric	Schmelkin et al., 1988 Bishop, 1987 Crandall & Moriarty, 1995
Morally repugnant	This dimension reflects the historical notion that disease is punishment for past or current sins	Long, 1990

Adapted from Weiner (1985).

Two dimensions were commonly found across samples. Persons tended to understand illness in terms of its severity: how an illness relates to morbidity and quality of life (Crandall & Moriarty, 1995; D'Andrade, Quinn, Nerlove, & Romney, 1972; Kerrick, 1969). Moreover, illness was frequently understood in terms of controllability: whether the person is responsible for the onset of the disease and coping with it (Kerrick, 1969; Long, 1990; Turk, Rudy, & Salovey, 1986). The controllability dimension overlapped with classification of illnesses into physical and psychological–behavioral disorders. The key distinction between these diseases is the belief that psychological–behavioral disorders are under relatively more personal control (Crandall & Moriarty, 1995). This last dimension directly relates to the assumptions of attribution theory.

A Model of Social Attributions

Although research on disease dimensions provides some insight on how people understand illness, these dimensions do not suggest how knowledge structures relate to affective and behavioral responses to stigma and other events. A separate body of research on attribution theory focused on two of the knowledge structures in Table 1—controllability and stability. Extensive research has supported the causal relationship between these constructs and both affective and behavioral responses to illnesses including psychiatric disorders.

A brief definition of attribution theory is provided before discussing these constructs. Attribution theory is fundamentally a model of human motivation and emotion based on the assumption that individuals search for causal understanding of everyday events (Weiner, 1980, 1983, 1985, 1993, 1995), for example, "Why did I get a pay raise?" "How come Republicans were voted out of Congress?" "Why can't that mentally ill person care for himself?" When encountering successful or unsuccessful outcomes, people ask themselves why this one and not another. Moreover, encountering success or failure leads to emotional and behavioral responses.

Meeting a person with mental illness is an outcome event that signals this kind of attributional reaction. How does the average citizen understand the labels or behaviors of the person with psychiatric disability? What kind of emotions and behaviors do these attributions yield? The focus of attribution research is to identify constructs that affect causal attributions like these. Research has consistently shown two to be especially important for answering the why questions of human motivation: stability of causes and controllability of causes (Weiner, 1993, 1995). These constructs and their relevance to mental health stigma are briefly reviewed.

Stability of Causality. Stability refers to the temporal nature of cause (Weiner, 1985, 1995). Some causes remain potent over time while others wax and wane. Research suggests that attributions about the stability of a cause do not affect the type of emotional or behavioral responses as much as the strength of those responses (Barnes, Ickes, & Kidd, 1979; Weiner, 1995; Weiner, Graham, & Chandler, 1982). Causal attributions are given more weight when viewed as stable and unchanging rather than unstable and fluctuating. A stable attribution, such as "I always fail at school no matter how hard I try." leads to an individual's

loss of hope: "Why try. I'll never get better." These kind of attributions also lead to decreased helping behaviors from others: "Don't waste your time; that guy will never improve."

Traditionally, mental illnesses like schizophrenia were viewed as a stable, rarely improving, process. Kraepelin (1896/1919), for example, defined the course of mental illness as progressively worsening, leading to a demented outcome and loss of independent functions. This viewpoint has been incorporated into popular notions of psychiatry; for example, earlier editions of the *Diagnostic and Statistical Manual of Mental Disorders* put the never improving course into their definitions of schizophrenia (American Psychiatric Association, 1980, 1987). As a result, the Kraepelinian prognosis for schizophrenia was poor and hope for the future was negligible (Anthony, 1994; Deegan, 1988). Treatment was limited to symptom management and recovery was not deemed possible. Moreover, the person's role in treatment was relegated to passive participant where the doctor prescribed treatments and patients were expected to comply.

Long-term follow-up research shows the prognosis of schizophrenia to be far brighter. Several research studies followed persons with severe mental illness identified in hospital settings for 20 years or more (Harding, 1988). If Kraepelin was correct, most of these people should have been found in state institutions at follow-up, incapable of work or independent living, and requiring high doses of medication to manage their symptoms. Instead, two out of three persons were living independently in the community, not needing medication, and working in some manner. Contrary to traditional notions, the majority of persons with severe mental illness seem to benefit from treatment and get on with their life. This research shows the power of perceptions, especially in the face of contrary evidence.

Controllability of Causes. 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 to events that are viewed as personally controllable. For example, a trial court is likely to judge more harshly the driver who was drunk when he struck a pedestrian than the driver who lost control because of poor brakes. Controllability has been further distinguished into onset controllability (e.g., whether the person is culpable for *contracting* an illness) and offset

responsibility (whether the person is trying to *cope* with, and overcome, an illness) (Schwarzer & Weiner, 1991).

Moral models yield attributions that mental illness is onset controllable and persons with mental illness are to blame for their symptoms. Biological models are more consistent with attributions that mental illness is uncontrollable at onset. One would think that morally based blame might have diminished in recent times since proponents of community psychiatry have pushed mental health services out of institutions and into the community in which the person rightfully belongs. However, Dain (1992) argued that the notion of sin prevalent in American Christianity causes blaming attributions toward mental illness to continue into the present day, especially in more conservative groups. Dain also believed that somatic views of illness are perceived by some groups as God working through nature; hence, physical illness may be God's punishment for sin, albeit in a less direct manner than God wishing mental illness on a person.

In terms of offset controllability, some clinical researchers believe that persons with mental illness are incapable of fully participating in treatment because they lack insight into their illness (Amador, Strauss, Yale, & Gorman, 1991; Corrigan, Liberman, & Engel, 1990). Hence, many symptoms of severe mental illness are frequently believed to be offset uncontrollable.
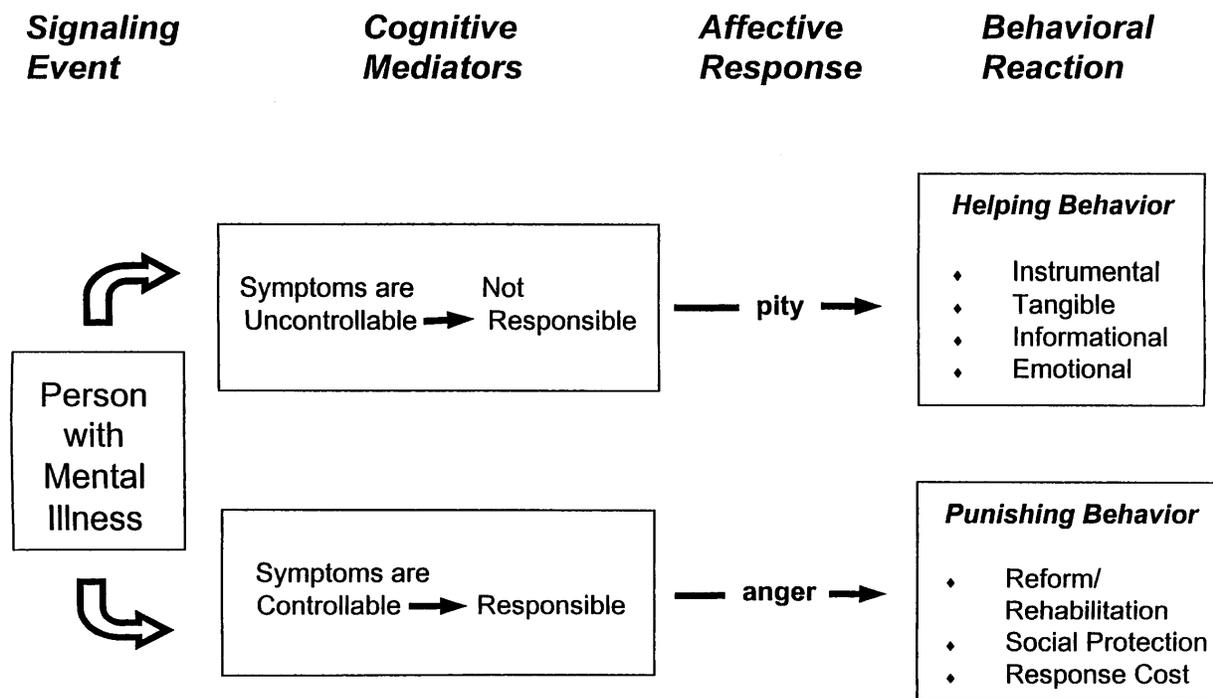
Weiner's theory suggests that controllability and responsibility attributions are associated with emotional responses. Persons who are viewed to be in control of a negative event (e.g., showing psychotic symptoms) are more likely to be held responsible and reacted to angrily (Dooley, 1995; Graham, Weiner, & Zucker, 1997; Reisenzein, 1986; Rush, 1998; Schmidt & Weiner, 1988; Weiner et al., 1982; Weiner et al., 1988). Similarly, persons who view themselves as in control of a negative event are likely to experience shame and guilt (Brown & Weiner, 1984; Covington & Omelich, 1979). Conversely, individuals who are not believed to be in control of a negative event are pitied by others (Dooley, 1995; Reisenzein, 1986; Schmidt & Weiner, 1988; Weiner et al., 1982; Weiner et al., 1988).

Controllability, Affect, and Behavioral Response. Additional research on attribution theory examined the relationship between attribution, affective response, *and* behavioral activity. As can be seen from Figure 2, the model generated from attribution research parallels the signal →

stereotype → discriminatory behavior paradigm outlined in Figure 1, with the exception that affect seems to mediate attributions and behaviors. This research represents the results of path analyses and not simple regression analyses; hence, the directionality among relationship in Figure 2 is fairly well supported. This research has shown that uncontrollability attributions about an event lead to pity and helping behavior (Dooley, 1995; Menec & Perry, 1998; Reisenzein, 1986; Schmidt & Weiner, 1988; Zucker & Weiner, 1993). For example, persons whose mental illnesses are attributed to a head injury sustained in a car accident are more likely to receive sympathy from others. This sympathy may lead to helping behavior: "I'd be willing to give him a ride to work."

Four kinds of helping behavior have been distinguished by researchers: *instrumental* support (e.g., solving a problem), *tangible* support (e.g., the donation of goods), *informational* support (e.g., providing advice), and *emotional* support (e.g., reassurance) (Cohen, 1988; Schwarzer & Weiner, 1991). This distinction parallels the various support roles that the mental health system provides persons with mental illness. Assertive community treatment involves instrumental and tangible support (Test, 1992). Skills training and psychoeducation serve the goals of informational support (Bellack, Mueser, Gingerich, & Agresta, 1997). Individual and group psychotherapies facilitate emotional support (Coursey, 1989; Coursey, Keller, & Farrell, 1995). Preliminary research suggests that persons respond to controllability attributions across support domains similarly; that is, persons who believe an individual is not in control of the onset of his or her problems are likely to respond equally with instrumental, tangible, informational, and emotional support (Schwarzer & Weiner, 1991). Note, however, that these findings are correlational and need to be examined using experimental designs in future research. In particular, are controllability attributions about mental illness related to specific patterns of instrumental, tangible, informational, and emotional support?

As outlined in Figure 2, research also shows a path between attributions about events under a person's control, angry reactions, and punishing behaviors (Graham, Hudley, & Williams, 1992; Graham et al., 1997; Reisenzein, 1986). Persons who believe that a mental illness is under an individual's control (e.g., because they lack character) are likely to angrily respond to that individual and act toward him or her in a punishing manner. Legal

Signaling Event

Cognitive Mediators

Affective Response

Behavioral Reaction

Person with Mental Illness

Symptoms are Uncontrollable ➡️ Not Responsible — **pity** ➡️

Helping Behavior
- Instrumental
- Tangible
- Informational
- Emotional

Symptoms are Controllable ➡️ Responsible — **anger** ➡️

Punishing Behavior
- Reform/ Rehabilitation
- Social Protection
- Response Cost

Figure 2. A path model represents the relationship between outcome events, attributions, affect, and behavioral responses. This figure was largely adapted from the work of Weiner (1985, 1988, 1995).

researchers have distinguished between *retributive* (i.e., wrongdoing justly merits punishment) and *utilitarian* (i.e., punishment serves to help persons fit back into society) forms of punishment (Graham et al., 1997; Moore, 1987; Vidmar & Miller, 1980). Remnants of moral models may lead to retribution in the mental health system (Dain, 1992; Fisher, 1994): persons are to blame for the problems that result from mental illness and should be disciplined for their misbehavior. Utilitarian notions of punishment, however, are more obvious in current practice. Utilitarian notions include reform or rehabilitation of the guilty, protection of society, and deterrence (Feinberg, 1970; Graham et al., 1997). The reform function of punishment is apparent; all states in the union provide laws that mandate inpatient and/or outpatient treatment to rehabilitate persons who are not fully capable of deciding about and participating in these treatments (Appelbaum & Gutheil, 1991; Simon, 1992). The deterrence function is also evident; most states permit civil commitment to protect society from persons who are considered dangerous to others.

A punitive response to controllability attributions may alternatively involve response costs; namely, citizens might take away opportunities from an individual because of perceived control over psychiatric symptoms. These response costs might include withholding opportunities for competitive jobs and good housing. They might also include social rules as well as formal statutes that prevent a group from dating, marrying, and having children. As outlined above, persons with mental illness are frequently deprived of opportunities like these (Corrigan, 1998). Research needs to determine whether this kind of deprivation is related to controllability attributions and angry responses.

Attribution Research and Mental Illness

Much of the remainder of this article examines the importance of controllability attributions in understanding mental illness stigma. Specifically, research on attribution theory and mental illness has examined three issues: differences in attributions between physical and psychiatric illnesses, the relationship between attributions and emotional or behavioral responses in the general public, and the relationship between attributions and emotional responses in family members. These findings begin to fill

in the path outlined in Figure 2 for the stigma of severe mental illness.

Causal Attributions Across Illnesses. Several studies have examined whether attributions vary between psychological and physical illnesses. Goffman (1963) first distinguished between stigma that represent abominations of the body (i.e., physical disorders) and blemishes of individual character (psychiatric disorders). Using this distinction, several studies examined controllability and stability attributions across stigmas with a mental-behavioral origin (e.g., AIDS, child abuse, drug abuse, obesity, and Vietnam War Syndrome) and those with a perceived, physical genesis (e.g., Alzheimer's disease, blindness, cancer, heart disease, paraplegia). Results suggest that mental-behavioral disorders are viewed as more controllable than physical disorders (Corrigan, River, Ludin, Wasowski, Campion, Mathisen, Goldstein, Bergman et al., in press; Lin, 1993; Weiner et al., 1988). Moreover, research suggests mental-behavioral disorders are less stable when stability is defined as unlikely to benefit from treatments or recover (Corrigan, River, Ludin, Wasowski, Campion, Mathisen, Goldstein, Bergman et al., in press; Weiner et al., 1988).

Additional research suggests that distinguishing attributions about physical versus psychiatric disabilities may be affected by ethnicity. African Americans with disabilities seem to be judged more harshly than European Americans with the same disabilities (Rush, 1998). Cross-cultural research on attributions suggests that Hindu concepts of kharma and dharma (Tharoor, 1989), Asian ideas of shame and obligation (Tamura & Lau, 1992), and Native American views of sadness and sorrow (Toussignant, 1984) may interfere with perceptions of controllability (Tharoor, 1989). Hence, the reaction of community members to a person's mental illness will be mediated by their concepts of fate and predisposition.

Attributions and Emotional/Behavioral Responses. Research has also examined whether the connection among signaling event, attribution, emotional response, and behavioral reaction, as outlined in Figure 2, applies to mental health stigmas. Research has found significant associations for controllability attributions about mental illness and two emotional reactions: anger and pity (Lin, 1993; Menec & Perry, 1998; Schwarzer & Weiner, 1991; Weiner et al., 1988). Citizens tend to respond angrily to persons who are believed to be in control of their symp-

toms; they pity persons who are believed to be victim to their symptoms and not in control. Research has also found a significant association between controllability attributions about mental illness and willingness to help: citizens are unwilling to help persons with severe mental illness who are believed to be in control of their symptoms (Corrigan, River, Luden, Penn et al., in press). Finally, research has supported the relationship between pity toward mental illness and helping behavior (Lin, 1993; Menec & Perry, 1998; Weiner et al., 1988). To our knowledge, research has not examined the relationship between mental illness attributions, affective response, and punishing behaviors. This is an especially important path because it will describe the cognitive and emotional antecedents to discriminatory behavior.

Attributions and Family Emotions. Several research studies have examined emotional responses of parents and siblings to family members with severe mental illness (Leff & Vaughn, 1985; Vaughn & Leff, 1976). Called *expressed emotion*, these feelings often include hostility and hypercriticism and have been shown to be associated with relapse in family members with schizophrenia (Kavanagh, 1992; Leff et al., 1989) and mood disorders (Hooley, Orley, & Teasdale, 1986; Miklowitz, Goldstein, Nuechterlein, Snyder, & Mintz, 1988; Okasha et al., 1994). Clinical investigators speculated that attributions about the family members' symptoms may lead to anger (Brewin, MacCarthy, Duda, & Vaughn, 1991). Subsequent research suggests relatives who attribute a person's symptoms to controllable factors are more likely to become hostile at and critical with that person (Barrowclough, Johnston, & Tarrier, 1994; Brewin et al., 1991; Hooley & Licht, 1997; Weisman & Lopez, 1997; Weisman, Lopez, Karno, & Jenkins, 1993; Weisman, Nuechterlein, Goldstein, & Snyder, 1998). Family attributions tend to be associated more with negative symptoms than with positive symptoms of the person with mental illness (Weisman & Lopez, 1997).

Two studies have examined the impact of family education programs on expressed emotion (Leff et al., 1989; Leff, Kuipers, Berkowitz, Eberlein-Vries, & Sturgeon, 1982). Post hoc analyses of these studies suggest that controllability attributions changed to a less blaming perspective as a result of these kinds of education programs (Brewin, 1994). However, change in attribution was not found to be associated with improvements in expressed emotion.

Figure 1 summarizes the literature on mental health stigma by connecting signaling events, behavioral responses, and stereotypic mediators. Figure 2 parallels this path and summarizes the research on attribution theory. It specifies signaling events, mediating attributions, affective responses, and behavioral reactions. Although the two models are similar in form, they differ in terms of specific elements. Reconciliation of these differences yields an agenda for research on attribution theory as applied to the stigma of mental illness. I review specific directions in this agenda as they appear sequentially in the paths of Figures 1 and 2: signaling events, mediating stereotypes and attributions, and emotional and behavioral reactions.

Signaling Events and Outcome Concerns

Attribution theory rests on the assumption that persons have an intrinsic need to understand the cause of events around them (Weiner, 1980). Hence, attribution models begin with an eliciting situation, signaling event, or apparent outcome for which the person observing the situation, event, or outcome is seeking an explanation.[2] Although these signaling events are the base on which subsequent attributions, emotional responses, and behavioral reactions rest, research has not extensively considered the various forms and functions of these signals. I said above that signaling events relevant to the stigma of mental illness may take the form of labels, odd behaviors, or strange physical appearances. Future research needs to examine how these various events affect the course of attributions, emotional responses, and behavioral reactions related to mental illness.

One obvious question is whether controllability attributions vary with the kind of signaling event. Research has shown that each of the signaling events in Figure 1—labels, symptom-related behaviors, and physical appearance—lead to stigmatizing beliefs by citizens (Penn & Martin, 1998). However, research has not, for the most part, investigated how these various signals lead to controllability attributions. Nor has research examined whether attributions vary across signaling events. In other words, do attributions about the stimulus figure vary when the same signaling event (i.e., the same person with mental illness) is alternately described in terms of label, symptoms, or physical appearance? Moreover, research needs to examine gradations within each kind of eliciting event. For example, we would not expect citizens to respond to all labels similarly. Research has shown that the label "psychotic patient" is viewed more negatively by citizens than "mentally ill patient" or "schizophrenia patient" (Corrigan, River, Ludin, Wasowski, Campion, Mathisen, Goldstein, Bergman et al., in press). Given the salience of dangerousness in perceptions about mental illness (Penn, Kommana, Mansfield, & Link, 1999), we would also expect that the association of a specific signaling event with prospective violence would affect cognitive mediation and the resulting emotions and behaviors.

This question leads to a methodological consideration: How are signaling events presented to research participants? Penn et al. (1994), for example, examined the effects of narratives that differed in labels and description of symptoms. Overall, they found that descriptions of symptoms in the acute phase of schizophrenia were associated with more stigma than was the label of schizophrenia alone. Research in this area could expand on this method by varying qualities of labels, symptoms, and behaviors to identify potent predictors of stigmatizing reactions as well as controllability attributions.

Another controlled strategy for examining the impact of signaling events is the use of pictures or videotapes to examine how physical appearance affects stigmatizing reactions (Penn & Martin, 1998). Although the use of narratives and pictures facilitates the internal validity of research in this area, it is difficult to determine how well these manipulations reflect real-world reactions to persons with mental illness. Weiner (1983) identified several limitations to research on attribution theory that illustrates this problem. For example, he observed that narratives are perceived as artificial by research participants because they differ with their life experience. These methods also have limited generalizability. Namely, the signaling variable of interest—mental illness label, psychiatric symptom, or physical feature—is *salient* in the narrative or picture. However, much of the presentation of mental illness is subtle (Goffman, 1963). Hence, the public does not typically experience mental illness as a signaling event in the obvious manner of studies with narratives and pictures. Research needs to examine the relative salience of labels, symptoms, and physical appearance on stigmatizing reactions.

Future research in this area needs to include signaling events that represent "real-world" experiences of persons with mental illness rather than narratives and videotapes.

A few studies have tried this by pairing research participants with confederates who were labeled mentally ill. For example, in one study of a memory task, participants were paired with two confederates who discussed their experiences in a mental hospital, a seemingly real experience with a person with mental illness (Piner & Kahle, 1984). Although an improvement, even research using this approach has limited generalizability because interactions were restricted to largely contrived work tasks. Research could be expanded in this area by pairing up participants in real-world settings with confederates. For example, researchers have sent confederates into job interviews to determine the impact of disclosing their mental health history on the employer (Farina & Felner, 1973; Webber & Orcutt, 1984).

Research on parent and sibling attributions about the controllability of family member's symptoms (e.g., Barrowclough et al., 1994; Brewin et al., 1991; Weisman & Lopez, 1997) provides perhaps the most ecologically sound test of signaling events and attributions. In these cases, individuals who intimately know the person with mental illness report on controllability attributions and emotional response. Attributions are spontaneously produced during the course of an interview suggesting that attributional processes are naturally pervasive and not generated by a psychologist's probe. Additional research in this area should determine what aspects of the signaling event (i.e., the person's positive symptoms, history of dangerousness, or current social functioning) are most related to controllability attributions.

Misattributions. Attribution theory is fundamentally a phenomenological paradigm, interested in people's *perceptions* of causes of signaling events. As a phenomenological model, theorists agree that attributions are not factual understandings of the causes of a signaling event per se, but rather people's perceptions or beliefs about causes (Weiner, 1993, 1995). Hence, researchers are interested in understanding the cognitive processes that affect these attributions. In a like manner, perception of the signaling event may be biased by the perceiver. Seeking attributions about why a perceived event (e.g., a "mental patient" hitting his brother) occurs does not mean the citizen has accurately perceived the event.

Because much of what makes up the signals to mental illness stigma is not readily comprehensible (Goffman, 1963), citizens may misread signs and incorrectly attribute

mental illness to an individual without psychiatric symptoms. There is evidence to support this claim. Frequent newspaper accounts attribute the homeless problem as largely persons with mental illness who are not being properly served by an adequate mental health system. In fact, epidemiological evidence seems to support the contrary: perhaps no more than 50% of samples have mental illness with many of these disabilities occurring as a reaction to homelessness (Koegel, 1992; Mowbray, 1985). Hence, research into signaling events needs to consider the significance of whether the resulting attributions are in fact, misrepresentations, because the stimulus was incorrectly perceived.

Stereotypes About Mental Illness and Attributions

Controllability and stability attributions are useful for identifying how citizens may emotionally and behaviorally respond to signaling events like mental illness. Note, however, that these attributions differ from the attitudes about mental illness that have been found in factor analyses of public and professional perceptions of mental illness, namely, that persons with mental illness are incapable of caring for themselves and that they need to be segregated from society because they are dangerous (Brockington et al., 1993; Cohen & Struening, 1962; Taylor & Dear, 1980). Although attitudes about dangerousness and ineffective self-care seem to affect the way in which the public understands and responds to signaling events related to mental illness, research has not supported any model connecting these attitudes with emotional reactions and behavioral responses. An important direction for research, therefore, would be examining the relationship between perceiving someone as unable to care for themselves or as dangerous, and controllability attributions. Support of such relationship might then suggest relationships between these knowledge structures; pity, anger, and other emotional reactions; and helping or punishing behaviors. Three hypothetical models illustrating these paths are outlined in Figure 3.

Before discussing these paths, let us consider the methodological rationales on which they are built and tested. In traditional attribution research, controllability is manipulated by varying information and perceptions about a signaling event. For example, controllability attributions about a mental health-related incident might be manipulated by informing the reader that psychotic symptoms resulted from head trauma suffered after a car acci-
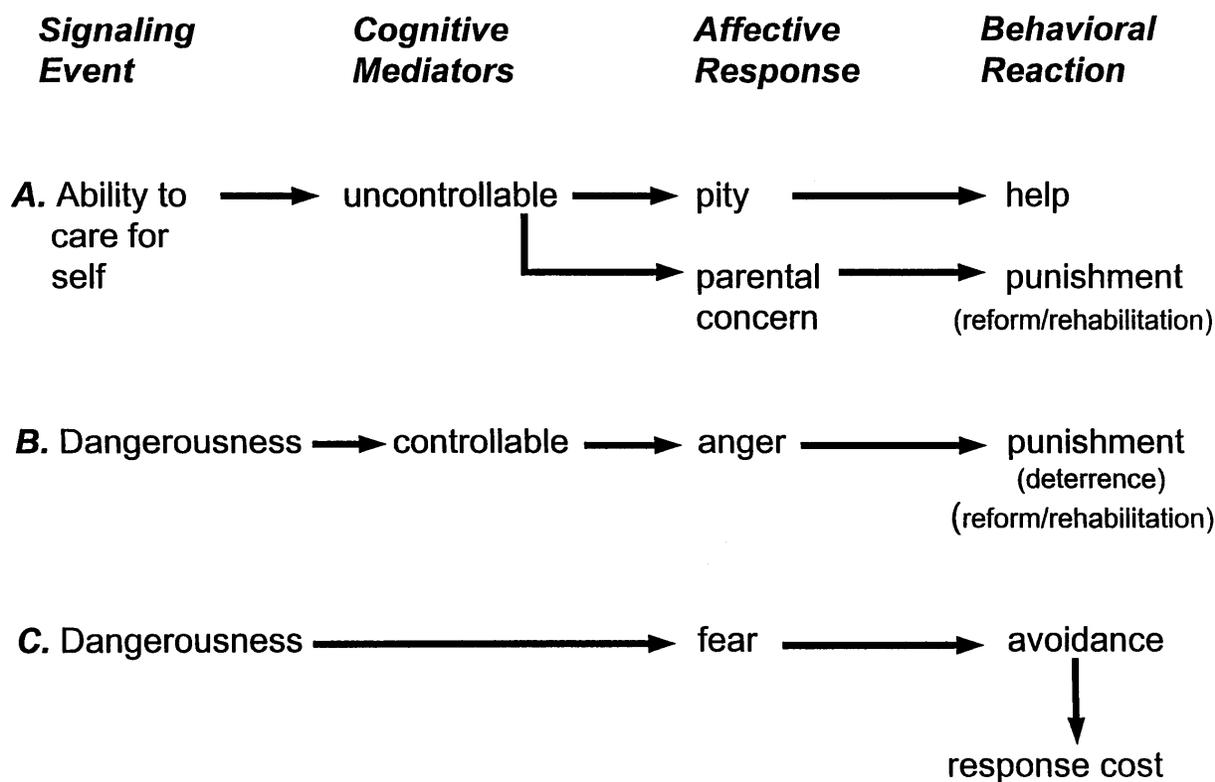
Figure 3. These are three paths that need to be examined in future research. In path A, perceptions that a person with mental illness is unable to care for self leads to uncontrollability attributions, pity, and helping behavior. However, the uncontrollability attribution may also lead to parental concern and a punitive approach to reform and rehabilitation. In path B, perception that a person is dangerous leads to controllability attributions, anger, and retribution. Path C shows dangerousness leading to fear, avoidance, and response costs such as failure to provide good jobs or housing.

dent (uncontrollable) or as the result of years of cocaine use (controlled). I was curious whether perceptions about a person's inability to care for self or dangerousness might also influence controllability attributions.

In the first path (path A) of Figure 3, the perception that persons with mental illness are unable to care for themselves is hypothesized to yield uncontrollability attributions. This path is consistent with the notion that the demands of everyday life overwhelm the meager skills and resources of persons with psychiatric disabilities (Brockington et al., 1993; Cohen & Struening, 1962). Uncontrollability attributions lead to two emotional reactions: pity and parental concern. The path to pity is consistent with other research on uncontrollability attributions (Menec & Perry, 1998; Reisenzein, 1986; Schmidt & Weiner, 1988); pity, in turn, is expected to lead to helping behavior. In particular, I would expect citizens to provide less personally demanding forms of support (instrumental

and tangible) to individuals with mental illness who are perceived to not be in control of their symptoms.

This path, however, is not sufficient to explain the total reaction to persons with mental illness believed to be incapable of caring for themselves. I added a branch to path A in Figure 3 representing another emotional response to these uncontrollability attributions: parental concern. Namely, persons with mental illness who cannot control their self-care needs are viewed as childlike and require the support of a parental figure (Brockington et al., 1993; Cohen & Struening, 1962). An uncontrollability attribution leads to parental concern, a feeling that the person needs to be nurtured by an authoritative figure who knows better the route to health. In turn, this emotion leads to reform and rehabilitation, a form of punitive behavior in Figure 3. Citizens believe that institutionalization and other mandatory treatments are needed to care for persons with mental illness because these persons are

incapable of understanding their disability or selecting appropriate life goals.

The second path (path B) in Figure 3 outlines attributions, emotional responses, and behavioral reactions to perceptions that a person with mental illness is dangerous. Attributing dangerousness to personal control leads to anger, which in turn yields aggressive retaliation (Betancourt & Blair, 1992; Graham et al., 1992; Graham et al., 1997). One question future research needs to address is whether the public is likely to view dangerousness related to mental illness as always under personal control. While research has not specifically examined this question, other studies have shown that mental and behavioral disabilities are generally viewed as more personally controllable than physical disabilities (Corrigan, River, Ludin, Wasowski, Campion, Mathisen, Goldstein, Bergman et al., in press; Lin, 1993; Weiner et al., 1988). Hence, I would expect this finding to generalize to the path between perceptions of dangerousness and attributions about controllability.

A second question that needs to be examined in research about path B is how the public responds to attributions that dangerousness is under personal control. Above, I discussed utilitarian forms of punishment as the behavioral result of angry reactions to controllability attributions (Feinberg, 1970; Graham et al., 1992; Graham et al., 1997). Treatment efforts that sought to reform persons' behaviors to meet community standards were posed as examples of retribution. Hence, I expect angry reactions to dangerousness to lead to coercive requirements that persons with mental illness conform behaviors, especially violent behaviors, to community standards.

Research suggests, however, that anger may not be the only emotion evoked by dangerousness attributions. Most people respond to violent threats of any kind with fear (Johnson-Dalzine, Dalzine, & Martin-Stanley, 1996). Several studies have found a specific relationship between perceiving persons with mental illness as dangerous and fearing them (Angermeyer & Matschinger, 1996; Levey & Howells, 1995; Link & Cullen, 1986; Wolff, Pathare, Craig, & Leff, 1996). Hence, this research leads to the last path of Figure 3 (path C). Rather than being mediated by controllability, perceptions of dangerousness may directly lead to fear, an emotion that has not been largely examined by attribution theorists. Fear about dangerousness yields avoidant behaviors; for example, one study showed a fearful reaction to two political assassination attempts attributed to persons with schizophrenia led to greater social distance between the public and the community of individuals with mental illness (Angermeyer & Matschinger, 1996). This historical finding has been supported by other research, namely, that perceptions of dangerousness lead to avoidance of persons with mental illness (Levey & Howells, 1995; Madianos et al., 1987). The avoidance behavior manifests itself as response cost. Employers fail to hire persons with mental illness to keep their distance. Landlords do not permit people with psychiatric disabilities to move into their properties.

Behavioral Outcomes

The model in Figure 2 suggests that controllability attributions lead to two classes of behavior: help, because citizens pity an uncontrolled event, and punishment, because the public is angry about a controlled event. This model is particularly compelling because it empirically supports a relationship between knowledge structures about a group and resulting behaviors toward them. Despite this conceptual link, perhaps the biggest flaw in attribution research is that most studies have measured the effect of attributions and emotional responses on how research participants *say* they would behaviorally respond, not on how they actually responded.

For example, most studies of social distance (a measure of behavioral response) use a self-report scale about a citizen's willingness to affiliate with a person with mental illness (Link et al., 1987; Penn et al., 1994). The self-report is not validated by observations of actual behaviors. Reisenzein's (1986) study that empirically supported the path between uncontrollability attributions, pity, and helping behavior measured the behavior using self-report, Likert-rated items such as "How likely is it that you would help that person?" Similarly, research that supported a relationship between controllability attributions, anger, and aggressive retaliation are based on statements about the best way to punish O. J. Simpson (Graham et al., 1997). Self-reports about how the person might respond are not equal to observation of their actual behavior.

A few studies have measured behavioral response to mental illness stigma. One method examined the quality of relationships between research participants and persons labeled as mentally ill. Research participants were randomly assigned to complete a memory task with two confederates (Piner & Kahle, 1984). In condition 1, confederates talked about how they had met in a general hospital where they were being treated for physical injuries.

In condition 2, the two confederates discussed their adventures in a mental hospital. Researchers examined qualities of the relationship between research participants and confederates including length of time to initiate and maintain verbalizations. Unfortunately, generalizability from these findings is somewhat limited.

Other studies have examined the impact of mental illness stigma on discriminatory behavior. One method examined how employers responded to job applicants who discussed recent psychiatric hospitalizations during the course of their interview (Farina & Felner, 1973; Webber & Orcutt, 1984). A second method included confederates calling landlords, disclosing their mental health history, and asking about the availability of rental property (Alisky & Iczkowski, 1990; Page, 1977, 1983). These designs are appealing because they involved real-world participants (i.e., employers and landlords), examined real-world interactions (i.e., job interviews and phone discussions about leasing property), and permitted some experimental control (i.e., confederates could present themselves with or without a psychiatric history).

To our knowledge, only one study examined mental illness stigma and helping behavior (Corrigan, River, Ludin, Wasowski, Campion, Mathisen, Goldstein, Gagnon et al., in press). Helping behavior in this study was defined as willingness to sign petitions against stigmatizing images of mental illness in the news media. Results showed a positive correlation between uncontrollability attributions and willingness to sign petitions. This was also one of the few studies that examined the relationship between attributions about mental illness and actual behavior. There are, however, several studies conducted on other targets of attribution theory that examined behavior responses. In one investigation, researchers examined the reactions of unknowing research participants to requests to borrow class notes (Barnes et al., 1979). The investigators manipulated controllability by having confederates notify participants of past effort to take notes. This design permitted experimental control but had limited external validity because it was completed on college students.

A second study used a more ecologically valid setting. Piliavin, Rodin, and Piliavin (1969) examined how subway riders responded to a confederate who had fallen to the floor. In one condition, the confederate smelled of liquor and carried a bottle (leading to control attributions); riders provided little help. In a second condition, the victim carried a black cane (leading to uncontrollabil-

ity attributions); riders were more likely to provide help here. This design showed how the effects of attributions on behaviors could be examined in more externally valid settings.

CHANGING STIGMA AND DISCRIMINATION

One benefit of an attribution model of mental illness stigma is that it may advance strategies for changing stigma and ending discrimination. The attribution model identifies constructs that should be targeted in antistigma programs. It also yields a research methodology for testing the effects of antistigma strategies. One of the goals in extrapolating this model to mental health stigma will be bridging the antistigma implications of attribution theory with the already existing programs and research on challenging mental health stigma (Corrigan & Penn, in press).

Research on Changing Mental Health Stigma

A relatively large body of investigations have examined ways to change mental health stigma and discrimination. Previously, Corrigan and Penn (1999) grouped change strategies for mental illness stigma into three approaches: protest, education, and contact. Groups protest inaccurate and hostile representations of mental illness as a way to challenge the stigmas they represent. These efforts send two messages. To the media: *stop* reporting inaccurate representations of mental illness. To the public: *stop* believing negative views about mental illness. Wahl (1995) believes citizens are encountering far fewer sanctioned examples of stigma and stereotypes because of protest efforts. There is, however, little empirical research on the psychological impact of protest campaigns on stigma and discrimination, suggesting an important direction for future research.

Protest is a reactive strategy; it diminishes negative attitudes about mental illness, but fails to promote more positive attitudes that are supported by facts. Education provides information so that the public can make more informed decisions about mental illness. This approach to changing stigma has been most thoroughly examined by investigators. Research, for example, has suggested that persons who evince a better understanding of mental illness are less likely to endorse stigma and discrimination (Brockington et al., 1993; Link & Cullen, 1986; Link et al., 1987; Roman & Floyd, 1981). Hence, the strategic provision of information about mental illness seems to lessen negative stereotypes. Several studies have shown that participation in education programs on mental illness

led to improved attitudes about persons with these problems (Holmes, Corrigan, Williams, Canar, & Kubiak, 1999; Keane, 1990, 1991; Morrison, 1976, 1977, 1980; Morrison, Becker, & Bourgeois, 1979; Morrison, Cocozza, & Vanderwyst, 1980; Morrison & Teta, 1977, 1978, 1979, 1980; Penn et al., 1994, in press; Thornton & Wahl, 1996). These programs are effective for a wide variety of participants, including college undergraduates, psychology graduate students, adolescents, nursing students, community residents, persons with mental illness, and medical students.

Stigma is further diminished when members of the general public meet persons with schizophrenia who are able to hold down jobs or live as good neighbors in the community. Research has shown an inverse relationship between having contact with a person with mental illness and endorsing psychiatric stigma (Holmes et al.,1999; Link & Cullen, 1986; Penn et al., 1994; Penn et al., in press). Hence, opportunities for the public to meet persons with severe mental illness may discount stigma. However, it is unclear from these studies whether contact led to diminished stigma or persons who do not stigmatize were more likely to seek contact (Sigelman & Welch, 1993). Desforges et al. (1991) examined the effects of strategic contact in a randomized controlled trial with 95 undergraduates. Results showed that initially prejudiced students, who participated in a cooperative task with a person described as recently released from a mental institution, endorsed more positive attitudes about the person and showed greater acceptance for mental illness in general.

Although these studies assumed a social cognitive approach to changing stigma and discrimination, specific investigations were largely atheoretical. They failed to identify specific change mechanisms based on a model like attribution theory. Nor did they pick outcome measures that reflected a priori directions for expected change. Most of these studies targeted changes in self-report. Actual improvements in behavior related to persons with mental illness have not been closely examined.

Research on Changing Attributions

Attribution theory may provide a model, well developed both conceptually and empirically, for identifying targets of stigma-change programs and for yielding significant change in the community's reaction to persons with mental illness. There is a small body of research examining efforts to change an individual's attributions about others that may guide this effort. Researchers have tried to change attributions, as well as the resulting emotions and behaviors, by directly targeting the attributions (Foersterling, 1985; Weiner, 1985). This may require replacing incorrect attributions—for example, "persons with mental illness are not responsible for their symptoms and cannot care for themselves"—with correct ones: "most persons with mental illness have some control over their behaviors and can live independently with sufficient supports." Alternatively, changing attributions may involve the provision of information that challenges a specific knowledge structure (Weiner, 1985). The attribution model, outlined in Figure 2, suggests that viewing a disability as uncontrolled leads to greater pity and helping behavior. Hence, education efforts that facilitate uncontrollability attributions should lead to more public sympathy and greater assistance. Crandall (1994) examined this hypothesis in terms of public attitudes about obesity. He educated a group of research participants on genetics and metabolism related to obesity, believing this information would prove to the participants that obesity is uncontrollable. Antifat attitudes diminished after learning this information.

One study, to our knowledge, has examined the impact of change strategies on controllability attributions (Corrigan, River, Ludin, Penn et al., in press). College students were randomly assigned to four conditions: a control condition; an education condition that reviewed myths about personal responsibility, dangerousness, and independent living; a protest condition that entreated people to stop stigmatizing persons with mental illness; and a contact condition that had a person with mental illness discuss his or her experiences. Results showed significant changes in controllability attributions for participants in the education and contact conditions. The study also examined how participation in the respective conditions affects helping behaviors. Results showed that participation in the various conditions had no significant affect on behaviors. This was a disappointing finding that needs to be examined in further research. However, it shows the value of an attribution model for mental illness stigma. Namely, the model describes the path from signaling event, to attribution, to resulting emotion, and reacting behavior. Each of these elements may serve as targets of antistigma programs. Each target also requires careful assessment in comprehensive research programs.

Real-World Change Programs

Changing public attitudes about mental illness is already a relatively large enterprise that, for the most part, does not involve professional communities. Instead, grassroots groups have targeted stigma in a deliberate attempt to improve the lot of persons with mental illness. For example, the National Alliance for the Mentally Ill (NAMI), a group of more than 200,000 family members and persons with severe mental illness, launched the Campaign to End Discrimination to combat stigma (Flynn, 1987; *NAMI E-news,* 1998). The National Mental Health Association, a mental health advocacy group, has been educating the public about mental illness for more than 90 years. National consumer groups have examined the loss of personal power that results from stigma and developed corresponding education and advocacy programs.

Government agencies have also joined the fray. The U.S. Center for Mental Health Services has an intramural office on consumer empowerment and funds extramural projects that attempt to discount stigma. Many state departments of mental health hire consumer advocates whose job, in part, includes vigilance to misrepresentations of mental health issues. Service groups made up of private citizens have also shown their concern about stigma. In 1996, Rotary International inaugurated "Erase the Stigma" (ETS), a campaign to educate American business leaders about the truths and misconceptions of severe mental illness.

Examination of these kind of real-world programs may challenge the research methodologies common to well-controlled experimental designs. Weiner and others successfully used internally valid strategies to support many of the basic assumptions of attribution theory. Similar research strategies may be useful for testing preliminary hypotheses about challenging mental illness stigma and discrimination. However. extrapolating these findings for further developing and evaluating real-world antistigma programs will require intervention research paradigms. In this kind of model, research examines the utility and exportability of changes strategies, as well as more traditional effectiveness and efficacy issues.

NOTES

1. I adhere to National Institute of Disability and Rehabilitation Research guidelines and refer to *persons* with psychiatric disability or severe mental illness rather than mentally ill "patients" (Blaska, 1993). Terms such as the latter promote stigmatizing views by reducing people to their roles as patients in the mental health system rather than individuals in the world who happen to suffer a psychiatric disability. Unfortunately, using person-first language can be confusing; it may be difficult to distinguish these persons from the general public who endorse stigma. For purposes of clarity, I refer to the latter group in this article as citizens or members of the general public.

2. Although the attribution literature has alternatively referred to eliciting situations, signaling events, and apparent outcomes, I have selected the term *signaling events* to refer to these constructs in the remainder of this article.

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