Implicit Attitudes and Discrimination against People with Physical Disabilities

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Although the study of prejudice, stereotyping, and discrimination has been a traditional focus of social psychological research, this work has devoted only limited attention to the attitudes and behaviors toward people with physical disabilities. Moreover, much of the social psychological research on bias has been guided directly by the Allport's (1954) classic volume, *The Nature of Prejudice*, and specifically by his definition of prejudice as "antipathy." Specifically, Allport (1954) defined prejudice as "an antipathy … directed toward a group as a whole, or toward an individual because he [sic] is a member of that group" (p. 9). Discrimination, according to Allport represented directly negative behavior, ranging from "antilocution" to violence. In this chapter, we argue that a narrow focus on antipathy toward people with physical disabilities obscures the complexity of contemporary attitudes and discrimination toward people with physical disabilities. Moreover, appreciating the complexity of orientations toward people with physical disabilities can provide insights into the experience of this form of stigmatization and inform policies and laws for combating bias.

The current chapter builds on traditional social psychological work on prejudice and discrimination generally but considers, theoretically and empirically, the unique aspects of bias against people with disabilities. Although the Americans with Disabilities Act (1990) defines disability as a physical or mental impairment that substantially limits major life activities, we focus of specifically on physical disability. The primary objectives of this chapter are to (a) offer an integrative theoretical analysis of the dynamics relative to bias against people with physical disabilities, and (b) demonstrate

how this framework can help synthesize different and often apparently contradictory evidence about this bias.

In this chapter we first review traditional social psychological approaches to prejudice and stigma generally. Then we discuss two integrative frameworks for understanding the complex manifestations of attitudes and behaviors toward members of stigmatized groups. One approach is Katz's (1981) foundational ambivalence-amplification framework; the other is a more recent, dual process model. After that, we demonstrate how the dual process model can help account for seemingly divergent findings in the literature, focusing on studies that involve interactions with disabled individuals. We conclude by discussing the theoretical and practical implications for of this social psychological perspective on bias toward people with physical disabilities, their experiences, and their responses to bias.

The Stigma of Physical Disability: Historical and Conceptual Background

Much of the psychological research on prejudice and discrimination from the 1920s through the 1950s portrayed prejudice as a psychopathology (Dovidio, 2001). Prejudice was viewed as a type of "social cancer." For example, stimulated politically by the Nazis' rise to power in Germany, historically by the Holocaust, and intellectually by the classic work on the authoritarian personality (Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950), psychologists of the 1950s typically viewed prejudice and other forms of racial and ethnic bias as dangerous aberrations from normal thinking. One implication of this perspective was that it focused on changing and constraining the attitudes of this "abnormal" minority as the primary way to combat prejudice. While acknowledging the contribution of authoritarianism and other abnormal psychological influences (e.g., such

as low self-esteem; Allport, 1954; Fein & Spencer, 1997), scholars have more recently recognized that prejudice and discrimination can also be rooted in *normal* psychological processes, such as the categorization of people into different groups ("we's" and "they's") and responses to perceived personal or group threats (Dovidio & Gaertner, 2004; Gaertner & Dovidio, 1986; Riek, Mania, & Gaertner, 2006).

Whereas psychologists traditionally focused on the common processes that underlie bias across groups, sociologists emphasized the unique qualities of different types of stigmas. For example, in his classic monograph, *Stigma*: *Notes on the Management of a Spoiled Identity*, Goffman (1963) distinguished three fundamental varieties of stigma or stigmatizing conditions: (a) tribal identities (e.g., race, sex, religion, or nation); (b) abominations of the body (e.g., physical deformities), and (c) blemishes of individual character (e.g., mental disorders, addictions, unemployment). The concept of differentiated reactions to members of different groups in terms of stereotypes (Fiske, Cuddy, Glick, & Xu, 2002), emotional reactions (Cottrell & Neuberg, 2005; Smith & Mackie, 2005), and behavioral orientations (Cuddy, Fiske, & Glick, 2007) is now an influential theme in psychological research on prejudice.

Whereas collective identity and group-based threats are particularly relevant to phenomena such as racism (in Goffman's terms, tribal identities), other forms of stigma, such as bias toward people with disabilities (in Goffman's terms, abominations of the body), have a more individually-based dynamic (Dovidio, Major, & Crocker, 2000). Stigmas of this type commonly produce negative affective reactions of an "untutored, primitive quality" (Jones et al., 1984, p. 226) and immediate behavioral aversion.

These responses may have a genetic, evolutionary basis. For example, Neuberg and Cottrell (2008) proposed that physical disability is associated with stigma because, across human evolutionary history, it may have signaled less than optimal genetic fitness, which is the central element guiding human behavior from a sociobiological perspective. Neuberg and Cottrell proposed, "Commonalities in stigmatization across cultures and relevant group-living species (e.g., chimpanzees) – for example, of those who violate the norm of reciprocity or who possess cues that heuristically signal contagious disease (e.g., morphological abnormalities; de Wall, 1989; Goodall, 1968) – point to tangible, material benefits of stigmatization for group members" (p. 68). From this perspective, because pathogens are typically microscopic, people have to rely on superficial cues to detect the potential presence of these threats. Physical disability can represent one such cue (Park, Faulkner, & Schaller, 2003).

One of the challenges for evolutionary explanations is to identify psychological mechanisms that translate these hypothesized predispositions into actual behaviors responses. With respect to this issue, Schaller and Duncan (2007) proposed that people develop a "behavioral immune system," a set of psychological processes that facilitate the detection and avoidance of people who might be infected with contagious pathogens. When confronted with cues that may signal exposure to contagious disease, people respond aversively and experience disgust (Curtis, Aunger, & Rabie, 2004). These cognitive and affective responses motivate avoidance (Kurzban & Leary, 2001; Schaller & Duncan, 2007).

Another proximate, psychological mechanism is existential motives. These motives, which are assumed to be universal, relate to a person's very existence, its

meaning, and the threat of its termination. Existential threats typically elicit anger directed at the parties perceived as the source of the threat. However, according to Terror Management Theory, human beings are unique in that they not only have the natural and fundamental instinct for self-preservation but also the awareness of the inevitability of their own mortality (Greenberg, Solomon, & Pyszczynski, 1997; Pyszczynski, Greenberg, Solomon, 1997; Solomon, Greenberg, & Pyszczynski, 1991, 2004). Thus, more indirect threats, such as cues that simply remind people of their vulnerability and mortality, can elicit both avoidance and attempts to reaffirm dominant cultural views and standards. Both of these forces contribute directly to the stigma of others who deviate physically from cultural standards of normality, including people with physical disabilities or other forms of physical impairment (Martens, Greenberg, Schimmel, & Landau, 2004). Simple exposure to a person with a physical disability activates death-related cognitions and arouses fear of one's own death among people without disabilities (particularly for men) (Hirshberger, Florian & Mikulincer, 2005, Study 3 and 4).

All of these perspectives point to the stigmatization of people with disabilities: They suggest pervasive negative attitudes and overt behavioral discrimination. Other data contradict this conclusion, though. Although many negative stereotypes of people with disabilities persist, across time, expressed attitudes toward people with disabilities have become more positive and inclusive (Griffiths & Lunsky, 2000). Across a range of surveys, people exhibit high levels of support for people with disabilities. In one study (Siperstein, Romano, Mohler, & Parker, 2005), for instance, 92% of consumers felt favorable toward companies that hire individuals with disabilities, and 87% reported that they would give preference to doing business with companies that sought to hire people

with disabilities. Moreover, perhaps because they are seen as overcoming greater obstacles, in psychological research people with disabilities are typically evaluated more positively for their accomplishments than are people of comparable achievement without disabilities. In their meta-analysis of the literature, Mullen and Dovidio (1992) found that when given comparable information about the performance of people, they rated the achievements of people with disabilities more highly than those without disabilities. Are the theories of stigmatization of people with physical disabilities then wrong?

Further complicating the picture is evidence of widespread perceptions of people with physical disabilities perceiving that they are discriminated against (Lowman, West, & McMahon, 2005). These claims are largely validated by research (O'Hara, 2004). People with disabilities are substantially underrepresented in the workforce, in part because of social bias (Hunt & Hunt, 2004).

Thus, there appears to be a number of fundamental, and in many ways startling, contradictions among theories of stigmatization, survey results, and experimental evidence. Nevertheless, the different findings can largely be reconciled by understanding the ambivalent, multidimensional nature of prejudice and stigma. In the next section, we describe earlier and more recent research on ambivalent nature of stigma against people with disabilities and corresponding results with respect to racial bias.

Integrative Theoretical Frameworks

One of the most important psychological insights into contemporary forms of prejudice and discrimination involves the recognition of the complexity of affective and cognitive processes involved. Pioneering work by Katz (1981) proposed the existence of ambivalent attitudes, and the consequent complex dynamics, in bias toward both people

with disabilities and among Whites toward Blacks. Recent frameworks, representing "dual process models," emphasize the role of explicit and implicit cognition – conscious and unconscious forces – in responses to members of stigmatized groups.

Ambivalent Attitudes

The ambivalence perspective on stigma was stimulated by the recognition that responses of people to members of stigmatized groups are not consistently negative. Negative feelings toward people with physical disabilities are frequently accompanied by sympathy; attitudes toward Blacks often involve sympathy and a desire to be fair and egalitarian, as well as negative affective reactions (Dovidio & Gaertner, 2004; Gaertner & Dovidio, 1986; Jones et al., 1984; Katz, 1981). As Livneh (1988) stated, "people with disabilities are construed as objects of ambivalence, triggering momentary, fluctuating favorable and unfavorable feelings of compassion and sympathy but also of aversion and distaste" (p. 37).

This ambivalence, under some conditions, can produce more positive reactions to members of stigmatized groups than to people who are not stigmatized. Katz (1981) developed one of the most influential, integrative models of ambivalence that applied to a wide range of stigmas. According to Katz (1981; Katz, Wakenhut, & Hass, 1986), a number of different traditionally stigmatized groups, including people with physical disabilities and Blacks, are associated with conflicted attitudes, containing both positive (e.g., sympathy) and negative (e.g., aversion) elements. These inconsistent and opposing elements create psychological tension that can be resolved, in the terms of Freudian psychodynamic theory, by a "reactive displacement of cathexis." Specifically, Katz proposed that responses towards groups associated with conflicted attitudes tend to be

amplified as the energy drawn from one impulse will be added to the other. As a consequence, people are more likely to respond either more positively or more negatively toward a member of a stigmatized group than of a nonstigmatized group, depending upon whether the behavior exhibited by other person is construed as favorable or unfavorable.

Two studies nicely illustrate support for Katz's position, demonstrating the generalizability of these effects in responses to people with physical disabilities and Blacks. Katz, Glass, Lucido, and Farber (1979) examined in separate studies of their report how participants responded to unintentionally harming a disabled person (in a wheelchair) versus a nondisabled person (Experiment 2) or a Black person versus a White person (Experiment 1). In the experiment investigating responses related to disabilities, participants were required to administer highly noxious noise or mild noise every time the confederate, who was in a wheelchair or not confined to the wheelchair, made an error on a task. Ostensibly at the end of the study, to assess how people responded to a request for assistance, participants received a note from the confederate asking for help (in the form of writing sample sentences) in a handwriting study she was conducting. Participants who caused unintentional harm by administering noxious noise to the confederate in the wheelchair were willing to write twice as many sentences than in any other condition. Furthermore, they wrote about three times as many sentences when they administered noxious sounds to the disabled than the nondisabled confederate. In a conceptual replication in which participants were told to give harsh or weak criticism to Black or White confederates who made errors on the task, Katz et al. (1979, Experiment 1) similarly found that the most assistance was given in the Black confederate/harsh criticism condition. Paralleling the results of the other study, after giving overly harsh

criticism, participants were again willing to write three times as many sentences for the Black than for the White confederate. These findings thus demonstrate the amplified positive response to members of stigmatized group when they have been unintentionally harmed.

Katz's ambivalence-amplification hypothesis, however, predicts that people will, under some conditions, also respond more negatively to members of stigmatized groups than to members of nonstigmatized groups. Building on research that revealed that when people harm somebody but are unable to compensate with help (Lerner & Simmons, 1966), they will often denigrate the victim as a way of justifying their action and affirming a "just world." The design of a study by Katz, Glass, Lucido, and Farber (1977) was almost identical to that of Katz et al. (1979, Experiment 2), in which participants administered noxious or mild noise to a confederate in a wheelchair or not in a wheelchair. The only difference was that they did not have an opportunity to subsequently help the confederate, but instead were given the opportunity to denigrate the confederate on a questionnaire. As predicted by Katz et al., the response to the confederate with the disability in the noxious noise condition was distinctly different from the other conditions. In this case, though, the response was distinctly negative: denigration was most severe in this condition. Moreover, Katz, Glass, and Cohen (1973) demonstrated a comparable pattern of denigration when the race of the confederate, not the disability, was manipulated. Denigration was most severe in noxious noise/Black confederate condition. These and other findings by Katz and his colleagues (see Katz et al., 1986) seemed to provide persuasive support for the ambivalence amplification conceptualization.

Gaertner and Dovidio (1986) incorporated key elements of Katz's (1981) framework into their work on aversive racism. Whereas traditional racism is blatant and direct, aversive racism represents a contemporary form of racism that operates, often unconsciously, in subtle and indirect ways. In particular, Gaertner and Dovidio (1986) wrote, "In our view, aversive racism represents a particular type of ambivalence in which the conflict is between feelings and beliefs associated with a sincerely egalitarian value system and unacknowledged negative feelings and beliefs about Blacks…. Aversive racists' inability to acknowledge their negative feelings … together with their sympathetic feelings toward victims of injustice convince them that their racial attitudes are largely positive" (p. 62). As a consequence, Whites will generally appear nonprejudiced in their overt expressions, but, because of their unacknowledged negative feelings, will discriminate against Blacks in subtle ways.

The basic prediction derived from the aversive racism framework is that aversive racist will behave openly in positive ways toward Blacks, because of their conscious egalitarian beliefs, but they will discriminate against Blacks when their behavior can be justified on the basis of some factor other than race (e.g., questionable qualifications for a position). Thus, aversive racists may regularly engage in discrimination while still maintaining a nonprejudiced self-image. In general, there is considerable support for the basic proposition of the aversive racism framework that contemporary biases are expressed in subtle rather than in blatant ways across a broad range of situations (Dovidio & Gaertner, 2004; Gaertner & Dovidio, 1986). For example, Whites do not show bias in their evaluation of Black relative to White job candidates when they are objectively well qualified for the position, but when the qualifications are less clear and a negative

decision can be justified on an apparently non-racial basis (deficiency in a valued credential), they discriminate against Black applicants (Dovidio & Gaertner, 2000; Hodson, Dovidio, & Gaertner, 2002). With respect to prosocial behavior, when White bystanders are the only witness to an emergency situation, thus bearing all of the responsibility for helping, they do not discriminate in their helping for Black or White victims. However, when Whites believe that other witnesses are present and they can rationalize their inactivity by assuming that someone else will intervene, they help Black victims much less frequently than White victims (Gaertner & Dovidio, 1977). A recent meta-analysis by Saucier, Miller, and Doucet (2005) of studies examining Whites' helping behavior over the past 40 years found that, consistent with the aversive racism framework, "less help was offered to Blacks relative to Whites when helpers had more attributional cues available for rationalizing the failure to help with reasons having nothing to do with race" (p. 10).

Although the aversive racism framework has formally focused on the domain of race relations, the basic principles also apply to the stigma of physical disability. Studies of employment decisions demonstrate patterns of subtle, rather than overt, discrimination against people with physical disabilities. These biases occur mainly on indirect measures or when differential treatment can be justified on the basis of job-related demands (see also Colella, De Nisi, & Varma, 1998; Stone & Colella, 1996). For example, in one study (Colella & Varma, 1999), participants did not directly discriminate against people with disabilities in their immediate evaluations of candidates when objective measures of job performance were available (and bias would be obvious). Participants did, however, discriminate indirectly, in terms of their expectations of future performance and their

training recommendations. In another experiment (Louvet, 2007, Study 1), management students evaluated job applicants who were disabled (in a wheelchair) or not. The position applicants sought required substantial public contact (sales) or minimal public contact (accounting). Participants demonstrated bias against disabled job applicants only when the job involved public contact. Moreover, the devaluation of disabled applicants emerged for traits reflecting competence, not for those related to agreeableness and personal qualities. Thus, participants discriminated against people with disabilities only when it could be justified on the basis of *other people's* (i.e., the public's) presumed bias.

Subtle bias against people with physical disabilities also occurs in more informal, social situations. Snyder, Kleck, Strenta, and Mentzer (1979) found that participants avoided a confederate with a physical disability, compared to one without a disability, when they could justify their action on some other basis (preference for viewing different movie) but not when there was no other readily available justification (when the movies were the same for the confederates with or without a disability). Moreover, people without disabilities show greater bias, in the form of anxiety, hostility, and avoidance, toward people with physical disabilities in more intimate interpersonal situations (Berry & Meyer, 1995). Thus, contemporary bias against people with physical disabilities appears to reflect "aversive disablism" (Deal, 2007), which is often unintentional, unrecognized, and personally denied.

Taken together, the work of Katz and his colleagues (see Katz, 1981; Katz et al., 1986) and the research of Gaertner and Dovidio (Dovidio & Gaertner, 2004; Gaertner & Dovidio, 1986) reveal the broad explanatory power of ambivalent attitudes for understanding a wide range of stigma. However, much of this work supported the role of

ambivalence indirectly, for example by demonstrating subtle and indirect rather than blatant and direct expressions of bias. Moreover, because of heightened awareness and greater social sensitivity, it has become increasingly difficult to assess the hypothesized negative component of ambivalent attitudes though self-reports (Fazio, Jackson, Dunton, & Williams, 1995). However, developments in the study of implicit cognition, which can involve unconscious attitudes, offered new insights into ambivalence and stigma. This approach was largely stimulated by interest in racial attitudes, but it has also been applied to responses to people with disabilities.

Dual Processes

Attitudes do not have to be consciously accessible to produce evaluative reactions. The mere presence of the attitude object is often sufficient to activate the associated attitude automatically (Chen & Bargh, 1997). In contrast to explicit processes which are conscious, deliberative, and controllable, these types of implicit processes involve a lack of awareness and are unintentionally activated (Greenwald & Banaji, 1995). Whereas explicit measures of prejudice typically utilize direct self-reports of attitudes, implicit measures utilize a variety of techniques, including indirect self-report responses, such as word fragment completions, linguistic cues, attributions and explanations (for a review, see Fazio & Olson, 2003). Implicit assessments also include measures of brain activity, as indicated by functional magnetic resonance imaging (fMRI) and psychophysiological indices of autonomic arousal or threat (Blascovich, Mendes, Hunter, Lickel, Kowai-Bell, 2001).

Measures involving response latencies, however, represent the most widely used techniques to assess implicit prejudice. One type of response latency measure involves

priming people, subliminally (Dovidio, Kawakami, Johnson, Johnson, & Howard, 1997; Wittenbrink, Judd, & Park, 1997) or supraliminally (Fazio et al., 1995), with a word, symbol, or photograph representing a social category (e.g., Blacks or Whites) and asking respondent to make a decision about a positively- or negatively-valenced word. The basic assumption is that shorter latencies reflect greater association between the social category and the positive or negative evaluation in memory. Another popular implicit measurement technique utilizing response latencies is the Implicit Association Test (IAT; Greenwald, McGhee, & Schwartz, 1998; Greenwald, Poehlman, Uhlmann, & Banaji, 2009) and the Go/No-Go Association Task (GNAT; Nosek & Banaji, 2001). The general assumption underlying these tests is that people respond more quickly to stimuli with compatible than incompatible evaluations (e.g., negative category and negative words vs. negative category and positive words).

The early work on implicit cognition, attitudes, and prejudice was devoted to establishing the existence of social processes that occur outside of awareness (Bargh & Pietromonaco, 1982), demonstrating their robustness (Bargh, 1999), and illustrating their operation in the area of prejudice (Dovidio, Evans, & Tyler, 1986; Gaertner & McLaughlin, 1983). The value of examining implicit measures of attitudes (and stereotypes) is now widely acknowledged (Blair, 2001; Fazio & Olson, 2003). Convergent evidence has been obtained with a variety of different priming procedures (see Blair, 2001; Dovidio, Kawakami, & Beach, 2001), as well as with other response latency techniques such as the Implicit Association Test (Greenwald et al., 1998).

Conceptually, implicit and explicit (i.e., self-report) attitudes have been considered as reflecting “dual attitudes” (Wilson, Lindsey, & Schooler, 2000). Dual

attitudes commonly arise developmentally. With experience or socialization, people change their attitudes. However, the original attitude is not replaced, but rather it is stored in memory and becomes implicit, whereas the newer attitude is conscious and explicit. In general, explicit attitudes can change and evolve relatively easily, whereas implicit attitudes, because they are rooted in overlearning and habitual reactions, persist and are much more difficult to alter (see Wilson et al., 2000).

Because explicit attitudes may be a product of similar experience and learning history and may, in fact, form the basis for the development of implicit attitudes through repeated exposure or application, explicit and implicit attitudes may correspond with each other. Other times, they might not. One factor that may determine the correspondence of the implicit and explicit evaluations involved in dual attitudes is the normative context for the attitude object. For instance, people may initially acquire negative attitudes toward groups through socialization within a particular cultural or historical context. Later, when norms change or the person is exposed to new normative proscriptions that dictate that people should *not* have these negative feelings toward these groups, people adopt explicit unbiased or positive attitudes. Nevertheless, negative implicit attitudes linger.

This reasoning suggests that there may be greater correspondence between implicit and explicit attitudes for issues that are not socially sensitive than for those that are socially sensitive or are associated with norms that are inconsistent with historical norms or traditional socialization. In line with this notion, Fazio, Williams, and Sanbonmatsu (1990) found that correlation between explicit and implicit attitudes for objects that did not involve socially sensitive issues (e.g., snakes, dentists) was high ($\underline{r}$ =

.63), whereas the correlation for objects associated with socially sensitive issues (e.g., pornography, Blacks) was weak and, in fact, negative (r = -.11). With respect to racial attitudes, three different meta-analytic reviews showed only a modest relationship (rs ranging from .12 to .24) between explicit and implicit measures of prejudice (Dovidio et al., 2001; Greenwald et al., 2009; Hofmann, Gawronski, Geschwender, Le, & Schmitt, 2005). Moreover, consistent with dual process models (such as aversive racism theory), implicit attitudes are consistently more negative than are explicit attitudes, not only toward Blacks but also toward other stigmatized groups, such as elderly persons (Nosek, Banaji, & Greenwald, 2002).

Research is increasingly documenting implicit biases toward people with physical disabilities, in particular. In a review of the literature, Guglielmi (1999) reported evidence of psychophysiological reactivity, in terms of electrodermal activity, heart rate, and facial EMG activity, indicating substantial discomfort in the presence of disabled individuals (see also Antonak & Livneh, 2000). Direct assessments of implicit and explicit attitudes reveal results similar to those for race: Implicit attitudes show significant bias against people with disabilities while explicit attitudes yield little evidence of prejudice; also, implicit and explicit attitudes are only weakly related (Pruett & Chan, 2006; Rojahn, Komelasky, & Man, 2008). These biases occur even among professionals who work directly with people with disabilities (Benham, 1988; Brodwin & Orange, 2002; Reeve, 2000; Robey, Beckley & Kirschner, 2006).

Beyond the typical evaluative bias, reflecting the stronger association of people with than without physical disabilities with more negative concepts, physical disability is implicitly associated with some unique qualities. Robey et al. (2006) further found that

participants implicitly associated disability with child-like characteristics, reflecting infantilizing attitudes – even though participants showed little evidence of this bias on explicit measures. In addition, in line with their disease-avoidance hypothesis, Park and colleagues (2003) found a significant implicit association between disability and disease, which was even stronger when a contextual cue about contagion was introduced.

An important reason for distinguishing between implicit and explicit attitudes is because they can influence behavior in different ways and under different conditions (Dovidio & Fazio, 1992; Fazio, 1990; Wilson et al., 2000). Wilson et al. (2000), for example, propose that "when dual attitudes exist, the implicit attitude is activated automatically, whereas the explicit one requires more capacity and motivation to retrieve from memory" (p. 104). Accordingly, the relative influence of explicit and implicit attitudes depends upon the type of response that is made. Explicit attitudes shape deliberative, well-considered responses in which the costs and benefits of various courses of action are weighed. Implicit attitudes influence "uncontrollable responses (e.g., some nonverbal behaviors) or responses that people do not view as an expression of their attitude and thus do not attempt to control" (p. 104). Thus, Wilson et al.'s position also indicates that implicit measures of prejudice will better predict spontaneous behavior, whereas explicit measures will better predict deliberative, controllable responses.

The evidence in the area of racial prejudice, in particular, and social attitudes, in general, is largely consistent with this proposition. For instance, Fazio et al. (1995) showed that direct ratings related to the legitimacy of the Rodney King verdict and the illegitimacy of the anger of the Black community were correlated mainly with explicit measures of prejudice such as self-reported attitudes and not with implicit measures of

prejudice such as response latencies. However, the implicit measure of prejudice correlated more highly than the explicit measure with the *relative* responsibility ascribed to Blacks and Whites for the tension and violence that ensued after the verdict as well as perceptions of participant's friendliness by a Black interviewer. These latter behaviors related to the implicit measure of prejudice because they were presumably more subtle and indirect manifestations of racial bias. Dovidio et al. (1997, Study 2) similarly found that whereas an explicit measure of prejudice predicted deliberative expressions of bias such as the perceived guilt of a Black defendant in a jury decision-making task, an implicit measure of prejudice primarily predicted less deliberative expressions of bias such as completions of letter sequences with more negative words under time pressure.

Dovidio et al. (1997, Study 3) pursued this line of research by examining the predictive validity of explicit and implicit measures of prejudice on overt evaluations of a Black partner and on more spontaneous, less controllable, nonverbal behavior such as eye contact and blinking. Although nonverbal behavior can be controlled to some extent, nonverbal signals are frequently emitted without awareness or intention (DePaulo & Friedman, 1998). As Fazio et al. (1995) proposed, "Nonverbal behavior, in particular, may be subject to 'leakage' of negativity that a person is experiencing, despite the individual's effort to behave in a non-prejudiced manner" (p. 1026). Whereas higher levels of visual contact (i.e., time spent looking at another person) reflect greater attraction, intimacy, and respect, higher rates of blinking reflect more negative arousal and tension. As hypothesized, although the explicit measure of prejudice predicted less favorable evaluations of a Black relative to a White interviewer by White participants, implicit prejudice did not predict these evaluations. In contrast, although the implicit

measure of racial prejudice predicted higher rates of blinking and less visual contact with the Black relative to the White interviewer, the explicit measure of prejudice predicted neither of these behaviors. Subsequent work provides further evidence that implicit measures of prejudice predict a range of nonverbal behaviors in Whites' interactions with Blacks better than do explicit measures (McConnell & Leibold, 2001).

These effects, which support the dual attitudes perspective, generalize to forms of stigma other than racial stigma. For instance, implicit anti-fat prejudice, but not explicit anti-fat attitudes, predicts how far people sit from an overweight woman (Bessenoff & Sherman, 2000). Pryor, Reeder, Yeadon, and Hesson-McInnis (2004, Study 1) have extended the dual-process approach to people's reactions to persons with HIV/AIDS. They found that participants initially showed "reflexive" and spontaneous, avoidance of a person who contracted HIV/AIDS through a blood transfusion; however, later they adjusted their behavior and responded in a less biased way, more in line with their motivation to control prejudice against people with AIDS. Together these results suggest that implicit rather than explicit measures of prejudice are generally better predictors of subtle nonverbal manifestations of bias toward a range of stigmatized groups.

Stigma, Disability, and Interactions: Re-examining the Literature

Understanding the distinction between implicit and explicit attitudes and their correlates can help integrate diverse, and seemingly contradictory, findings both across different studies and across different measures within studies. In this section, we review evidence of nonverbal responses, which are presumed to reflect implicit negative attitudes, and verbal responses, which are hypothesized to be linked to explicit, more

positive attitudes, across a range of stigmatized groups, including studies that involve interactions with people with physical disabilities (see Hebl & Dovidio, 2005).

Nonverbal Behaviors

Most interactive research has focused on stigmatizers' nonverbal reactions to targets. This research reveals negative behavioral biases against targets. Table 1 depicts the interactive studies that have shown such findings. These results emerge across a range of stigmas – whether it involves wearing an eyepatch; having a birthmark; or being Black, obese, or pregnant. In the case of reactions toward physically disabled targets, in particular, nondisabled participants interacting with disabled rather than nondisabled individuals display reduced gesturing (Kleck, 1968), stand farther away (Kleck, 1969), offer more exaggerated and inaccurate feedback (Gouvier, Coon, Todd, & Fuller, 1994; Hastorf, Northcraft, & Picciotto, 1979), and attempt to avoid interactions altogether (Comer & Piliavin, 1972).

Verbal behaviors

Perhaps because of the different affective and cognitive processes involved, past stigma research has also consistently shown that nonverbal displays toward people with physical disabilities and other types of stigma often are at odds with their verbal behaviors. People often report feeling positively toward targets, but their nonverbal and paraverbal behaviors often indicate more negative reactions (see Table 2). For example, in a classic study by Kleck, Ono, and Hastorf (1966), participants who interviewed a physically disabled (versus a nondisabled) applicant were more physiologically aroused during the interaction, took a longer time deciding what questions to ask, terminated the interview sooner, and showed more behavioral inhibition. At the same time, however,

participants were more likely to distort their own personal opinions in a direction consistent with those thought to be held by disabled applicants than the nondisabled applicants, so that they could ostensibly appear kind. Consistent with this, nondisabled participants were more likely to report enhanced positive impressions of physically disabled individuals, but simultaneously maintained greater interaction distance with them than with nondisabled interactants and showed signs of anxiety (Kleck, 1969).

A plausible reason for these verbal and nonverbal mismatches is that nondisabled people when interacting with people with disabilities may focus the majority of their attention on managing their verbal behaviors, which may be easier to monitor and control than nonverbal behaviors (DePaulo & Friedman, 1998). Moreover, to the extent that monitoring and controlling verbal responses involve high cognitive demand, these activities may actually facilitate the expression of more spontaneous responses (Gilbert & Hixon, 1991). As a consequence, people may be less adept at managing affect-driven behaviors that occur in interactions spontaneously and without time for deliberation. Thus, favorable verbal behaviors, which are controllable, reflect nondisabled people's conscious effort to conform to the social norm of being kind to physically disabled individuals; nonverbal behaviors, which are less easily controlled, may represent a more automatic and implicit "negative affective disposition toward physically disabled individuals" (Hebl & Kleck, 2000, p. 423). Moreover, people tend to respond reciprocally to others' nonverbal behavior (Tiedens & Fragale, 2003). As a result, individuals with disabilities may tend to respond with confirming nonverbal reactions (Comer & Piliavin, 1972), which support original negative expectations, further increase

anxiety and exacerbate tensions (Hebl & Kleck, 2000), and create a self-fulfilling prophecy.

Implications and Conclusions

The psychological evidence demonstrates that stigma toward people with physical disabilities reflects ambivalent orientations. On the one hand, people have apparent sympathy toward people with disabilities and express support for them in overt ways. Surveys show that people feel positively toward companies that employ people with disabilities and, when given the opportunity, people personally recommend hiring candidates with disabilities who are clearly qualified for a position. On the other hand, people often spontaneously exhibit negative emotional reactions to people with disabilities, discriminate against them in subtle ways, avoid interactions with them, and manifest their anxiety in interactions with people with disabilities that they can not avoid. Drawing on the broader literature on stigma, social psychological theory, particularly recent empirical and conceptual developments relating to dual-attitude processes, helps to explain these divergent responses to people with physical disabilities.

This perspective also offers insights into the dynamics of social exchanges and the impressions and responses of people with disabilities in these situations. Interactions involving people with disabilities are characterized by mixed messages, "awkward moments," and anxiety (Hebl & Kleck, 2000). From the perspective of people with disabilities, these mixed messages can create suspicions of others' true feelings and intentions. As a consequence, these interactions substantially tax cognitive resources (Salvatore & Shelton, 2007). Mixed messages also contribute to mistrust (Dovidio, Gaertner, Kawakami, & Hodson, 2002), which in turn can lead to increased vigilance and

sensitivity to negative cues by people with physical disabilities, as it does for members of other stigmatized groups (Vorauer, 2006). Thus, disabled individuals may "show a tendency to perceive even neutral behaviors displayed by nondisabled individuals as discriminatory actions against their stigmatized status" (Hebl & Kleck, 2000, p. 424).

Because nonverbal cues of anxiety are similar to those reflecting negative attitudes, the anxiety aroused by awkward moments in exchanges between members of stigmatized and nonstigmatized groups is often misinterpreted as aversion or negativity (Pearson et al., 2008). Thus, high levels of anxiety, which are characteristic of these interactions, can lead to disengagement from contact and the avoidance of future contact (Plant & Devine, 2003; Shelton & Richeson, 2006). These processes, which have been demonstrated with others forms of sigma, have not yet been fully explored in the context of people with physical disabilities.

Future research needs also to consider the distinctive aspects of the stigma of people with physical disabilities, beyond those processes that it has in common with other types of stigma. In this chapter, we focused only physical disability; we did not include other forms of impairment, such as psychological impairment, in our review or analysis. Physical and mental disabilities, for example, elicit different emotional reactions. While physical disability (as well as some forms of mental impairment, such as mental retardation) generate some feelings of sympathy (Katz, 1981) and pity (Cuddy et al., 2007), they can simultaneously elicit anxiety and disgust. By contrast, in part because they are associated with perceptions of unpredictability and danger, many forms of mental illness, such as schizophrenia and depression, also arouse a substantial fear (Angermeyer & Matschinger, 2004; Corrigan et al., 2005).

Responses to people with physical disabilities may also differ in specifiable ways from reactions to members of other types of stigmatized groups. Compared to "tribal stigmas," for instance, exposure to a person with physical disabilities is more likely to activate associations with disease (Park et al., 2003) or with child-like characteristics (Robey et al., 2006). These associations are likely to not only to limit contact with people with disabilities, but also to shape interactions when they do occur. Because of child-like associations (e.g., weak and dependent, see Fichten & Amsel, 1986), nondisabled people may behave in patronizing ways toward people with physical disabilities. Also, when they offer assistance, it is more likely to promote dependency than to empower people with disabilities, which can also generate resentment among people with disabilities (Nadler, 2002).

Moreover, within the domain of stigma of physical disabilities, there are likely differentiated responses to different types of disabilities. Physical disabilities vary substantially in terms of visibility, controllability of the disability, and mobility-impairment (Hebl & Kleck, 2000). These differences affect both disabled individuals' experiences and challenges and the affective, attitudinal, and behavioral responses of nondisabled people. For instance, individuals with less visible stigmas (e.g., epilepsy, wearing a colostomy bag) tend to have higher self-esteem and face less problematic interactions than those with more evident stigmas (e.g., birthmark, facial disfiguration) (Crocker & Major, 1994; Jones et al., 1984; Kleck, 1968).

The heterogeneity of physical disability also has important policy implications. Prerequisite conditions for collective action by members of stigmatized groups to occur are, first, a strong sense of a shared social identity and, second, recognition of collective

mistreatment (Wright & Lubensky, 2009). These conditions are less likely to occur for groups in which stigmatization takes different forms for different group members, the members vary widely in the nature of their experience of stigmatization, and in which people identify more strongly with subgroups (such as with others who are hearing or sight impaired) than with the larger group as a whole (people with physical disabilities).

Nevertheless, policies can focus on interventions that emphasize individual experiences and interactions. One such intervention is intergroup contact. Intergroup contact under certain conditions, involving cooperation, personal exchanges, equal status, and cooperation, represents one of psychology's most effective strategies for reducing bias and improving intergroup relations (Allport 1954; Williams, 1947; see also Dovidio, Gaertner, & Kawakami, 2003; Pettigrew, 1998). Although much of this work has focused on contact between members of different racial and ethnic groups (Pettigrew & Tropp, 2006), this technique has been effective for improving attitudes toward people with physical disabilities (Amsel & Fichten, 1988; Krahe & Altwasser, 2006; Maras & Brown, 1996, 2000; Mpofu, 2003) as well as those with mental illness (Kolodziej & Johnson, 1996). Intergroup contact reduces bias by decreasing anxiety, providing opportunities to disconfirm stereotypes, and changing expectations for interactions in the future (Plant, 2004).

At a larger scale, policies might be directed at addressing the general perspective with which people see those with physical disabilities, rather than trying to undermine particular stereotypic beliefs that may vary substantially across different types of disabilities. Consistent with this view, recent initiatives have attempted to shift the focus of objects of change from people with disabilities to those without disabilities. In

particular, policy and public education efforts encourage people to abandon a *medical model* that views people with disabilities as individuals who need to be helped and rehabilitated and pressures them to appear "normal." In its place, these initiatives advocate a *social model* that recognizes the role of society in constructing disability as a problem and excluding people with disabilities (Jaeger & Bowman, 2005; Kahn, 1984; Swain, French, & Cameron, 2003). Thus, social policies might be directed at creating a more accessible and integrated society, not only in terms of environment and services (e.g., accommodations, access to buildings), but also in terms of a "more realistic and less paternalistic" representation of people with disabilities (e.g., in the media) and increased possibility of autonomy for people with disabilities (e.g., though education, employment).

In conclusion, research on prejudice and stigma reveals the complexity of orientations toward people with physical disabilities. Attitudes are ambivalent and conflicted, and people may be unaware of the existence or source of their negativity. Even though people may consciously be sympathetic and supportive, much of people's responses toward people with disabilities is motivated spontaneously by negative emotional reactions and guided by implicit stereotypes and associations. Thus, discrimination is typically subtle rather than blatant, and it often takes the form of avoidance, physically or psychologically (e.g., producing the "invisibility" of people with disabilities). In addition, when they do occur, interactions between people with disabilities and those who are not disabled frequently involve mixed messages, anxiety, and awkwardness, which often lead to miscommunication and mistrust. These types of exchanges are demanding cognitively, emotionally, and socially for both interactants.

Nevertheless, bias against people with disabilities is not inevitable. Individually, recognition of the unconscious stereotypes and spontaneous negative reactions that violate one's personal standards can motivate people to consciously regulate their behavior in ways that can control and ultimately inhibit implicit bias (Monteith, Arthur, & McQueary, 2009). Interpersonally, intergroup contact reduces anxiety and disconfirms negative sterotypes. And socially, reframing the "problem" of people with disabilities from their deviance to the biases of nondisabled people promises to chane the ways people think about, feel about, and act toward people with disabilities in way of mutual benefit to society.

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Table 1: Examples of past interactive studies demonstrating negativity and avoidance in nonverbal behaviors (adapted from Hebl & Dovidio, 2005)

Study	Type of Stigma	Result
Blascovich, Mendes, Hunter, Lickel, & Kowai-Bell (2001)	Facial Birthmark	Those interacting with stigmatized (vs. nonstigmatized) partners performed more poorly and showed greater cardiovascular reactivity consistent with threat.
Doob & Ecker (1970)	Eyepatch	Housewives helped those wearing an eyepatch more, but only if it did not involve further face-to-face interaction.
Edelmann, Evans, Pegg, & Tremain (1983)	Red Birthmark	Woman with/without birthmark asked stranger for directions. Birthmark elicited less eye contact and shortened interactions.
Harris, Milich, Corbitt, Hoover, & Brady (1992)	ADHD	Interactants were less friendly and talked less with children labeled as ADHD than these same children without such labels.
Hastorf, Northcraft, & Picciotto (1979)	Physical Disability	When a performer was thought to be physically disabled, he received less accurate feedback than when he was presented as an able-bodied individual.
Ickes (1984)	Race = Black	Black and White interactants sometimes experienced increased anxiety and concern about mixed interactions.
King, Shapiro, Hebl, Singletary, & Turner (2006)	Obese	Store personnel assisted obese customers in shortened, more negative interactions than average weight customers.
Kite & Deaux (1986)	Homosexuality	Stigmatizers liked 'gay' interactants less, recalled less about these partners, and remembered more stereotypical information, particularly those who were intolerant.
Kleck (1968)	Physical Disability	People sat farther from disabled than nondisabled persons.
Klink & Wagner (1999)	Outgroup Foreigner	Nine out of 14 field experiments revealed that foreigners received worse behavioral treatment than did citizens.
Langer, Fiske, Taylor, & Chanowitz (1977)	Physical Disability; Pregnancy	Participants sat farther away from disabled and from pregnant individuals than a nonstigmatized individual.
Marinelli (1974)	Physical Disability	Participants interacting with a facially disfigured person (vs. non disfigured) showed a tendency of higher heart rate
Perlman & Routh (1980)	Physical Disability	Participants looked at and talked less to, and made fewer movements toward disabled than nondisabled child.
Sigelman, Adams, Meek & Purcell (1986)	Physical Disability	Children interviewed by a disabled person stood closer to him and stare at the body (curiosity), while parents stood closer to their children (protective gesture).
Word, Zanna, & Cooper (1974)	Race = Black	Interviewers made more speech errors and spent shorter amounts of time with Black than White applicants.

Table 2: Examples of past studies showing a mismatch between verbal and nonverbal behaviors (adapted from Hebl & Dovidio, 2005)

Study	Type of Stigma	Result
Cuenot & Fugita (1982)	Homosexuality	Participants showed no difference in eye contact; spoke faster to the gay versus nongay targets; and did not alter publicly expressed attitudes about homosexuality, but espoused more conservative sexual behavior attitudes.
Doob & Ecker (1970)	Eyepatch	Housewives indicated a willingness to help those wearing an eyepatch more than those not wearing a patch, but only if it did not involve further face-to-face interaction.
Dovidio, Kawakami, & Gaertner (2002)	Race = Black	White stigmatizers focused on positive verbal behaviors they expressed whereas Black targets focused on stigmatizers' less positive nonverbals to judge responses.
Frable, Blackstone, & Scherbaum (1990)	Race = Black; Homosexuality; Acne; Obesity	"Normal" participants behaviorally compensated (talked, smiled, and encouraged) deviants but simultaneously reported liking them less.
Gargiulo & Yonker (1983)	Physical Disability	Comparing teachers with different levels of experience, no group differences emerged for self-reported stress, but significantly higher heart rate for those less experienced
Gouvier, Coon, Todd, & Fuller (1994)	Physical Disability	Although approached similarly, individuals with a disability were addressed differently (e.g., shorter interactions, simpler language, than those without disabilities.)
Hebl, Foster, Mannix, & Dovidio (2002)	Homosexuality	Employers did not formally discriminate (e.g., hiring) against gay (vs. heterosexual) applicants but less covert, more nonverbal-based measures did reveal discrimination.
Heineman, Pellander, Vogelbusch & Wojtek (1981)	Physical Disability; Homosexuality	More positive trait ratings and self-rated emotions for disabled individuals than homosexual and nonstigmatized individuals, but higher skin conductance response and higher interpersonal distance
Ickes (1984)	Race = Black	White participants displayed more interactional involvement than did Black partners but also reported more stress and discomfort.
Katz, Farber, Glass, Lucido, & Emswiller (1978)	Physical Disability	If disabled individuals displayed inappropriate social behavior, subjects express more negativity after, but not during, the interaction.
Kleck, Ono, & Hastorf (1966)	Physical Disability	Participants terminated the interaction sooner and exhibited reduced motoric behaviors, but distorted opinions more in line with disabled than nondisabled interactants.
Shelton (2003)	Black	Whites trying not to be prejudiced felt more anxiety and enjoyed interactions less, but were liked more by Blacks.
Tagalakis, Amsel, & Fichten (1988)	Physical Disability	More positive evaluations for disabled than nondisabled on 8 of 10 measures, but hiring preference against disabled.