Order Number 9218220

Group identification and self-esteem among members of a non-ethnic minority group: The case of deaf people

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City University of New York, 1992

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GROUP IDENTIFICATION AND SELF-ESTEEM AMONG MEMBERS OF A NON-ETHNIC MINORITY GROUP: THE CASE OF DEAF PEOPLE

by

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A dissertation submitted to the Graduate Faculty
in Psychology in partial Fulfillment of the requirements
for the degree of Doctor of Philosophy,
The City University of New York

1992

This manuscript has been read and accepted for the Graduate Faculty in Psychology in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

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Abstract

GROUP IDENTITY AND SELF-ESTEEM

AMONG MEMBERS OF A NON-ETHNIC MINORITY GROUP:

THE CASE OF DEAF PEOPLE

by

Yael Bat-Chava

Adviser: Professor Kay Deaux

This study examined the effect of group identity on self-esteem in deaf adults. Social Identity Theory (Tajfel, 1981) posits that to maintain high self-esteem, members of minority groups may either identify with their group, or leave the group and identify with the majority. The theory predicts that both type of members will have comparable levels of self-esteem. Crocker and Major (1989), on the other hand, suggest that people with higher levels of group identity will have higher self-esteem.

Two studies were conducted to test these predictions. In the first study, 267 deaf adults completed a short questionnaire measuring their group identity, self-esteem, attitudes toward deaf people, and the level of deafness to which they were exposed in childhood. In the second study in-depth interviews were conducted with a subsample of 47 individuals, measuring similar constructs.

Results from the questionnaire study failed to support Crocker and Major's model as stated, and suggested that rather than mediation, moderation may better explain the

relationships among the variables. Specifically, the interaction of deafness orientation (both in the family and school) with group identification had a positive effect on self-esteem, although each of these variables did not have an effect by itself. In addition, ingroup comparisons and the importance of clear speech each interacted with group identification to produce varying levels of self-esteem.

Other results supported Social Identity Theory and failed to support Crocker and Major's model. Individuals who strongly identified with the deaf community and those who did not had comparable levels of self-esteem. In addition, the interview study indicated that self-esteem was positively associated with higher levels of integration in the mainstream, rather than with higher group identification.

Taken together, these results paint a complex picture of the relationship between group identity and self-esteem. They suggest that both Social Identity Theory and Crocker and Major's model would need to be revised. In addition, they point to the need to consider the characteristics of different groups and to study these groups in their ecological context.

ACKNOWLEDGEMENTS

To my parents, with love.

This project would not have been possible without the assistance of numerous people. My committee members deserve special thanks. Kay Deaux, my advisor, always knew when to let me work on my own and when to push me to work harder; her theoretical guidance, readings of a million and one versions of this manuscript, and her trust in my abilities have been invaluable. Tracey A. Revenson helped me sharpen my thinking and perfect my writing (I, too, am using purple pens in correcting my students' papers now). David M. Rindskopf had taught me everything I know about statistics. Together they made a supportive and rigorous committee. Thanks also to my readers, Edward Seidman and Howard Ehrlichman for thoughtful comments. Their questions at my oral defense made this a much better paper.

Vassar College's Undergraduate Research Summer Institute (URSI), the Pew Foundation, the American Psychological Association and the Psychology Department at the Graduate Center contributed funds and/or facilities that enabled me to complete this dissertation.

Many people helped with carrying out the project itself. Recruitment of research participants was possible through the assistance of Dorothy Cohler from the NYC Coalition of Deaf Educators (CODE); Deborah Copland, Lindsey Dunn, and Linda Annala from the program for deaf adults at Lehman College; Desire Duda from the program for deaf adults at LaGuardia Community College; Judy Jonas from Fairlawn Deaf Program; Robbie O'Hara from the NYS chapter of the A.G. Bell Association for the Deaf; Rusty

Rosen and Samuel Lewis from the NYC Civic Association of the Deaf; Mark Ross from the New York League for the Hard of Hearing; Ellen Roth from the Mayor's Office for the Disabled; and Joel Zeev and Pearl Johnson from the New York Society for the Deaf.

Interviews would not have been possible without the dedicated assistance of my sign language interpreters: Joy Kahn, Cathy Markland, Eugene Burqueine, Peggy Cox, and especially Terri Heffernan who tirelessly went with me everywhere any time I needed her help.

Barbara Brauer from the Gallaudet Research Institute generously provided me with the ASL version of the Tennessee Self-Concept Scale. People at Educational Resources at the Graduate Center, and at the Audio-Visual department at Vassar College provided invaluable technical help.

I thank my students Susan Zeller, Michelle Robbins, and Jean Lim who worked endlessly at transcribing the interviews and coding them. Thanks also to my friend Hanna Gafni, without whom I could have never set appointments with my interviewees. Less formal and equally valuable help I received from my friends and colleagues both at the Graduate Center and at Vassar. I spent many hours discussing my project (and my life) with Linda Bastone, Brian Cassel, Debbie Majerovitz and Kathleen Etheir; without their emotional support my years at the Graduate Center would have been less fun and less productive. Greg Herek, Emda Orr and Arie Nadler provided useful comments during the earlier stages of the project. Eric Amsel, Randy Cornelius, Janet Gray, Anne Constantinople, Janet Andrews, June Hampson, and Ute Fischer provided comments, suggestions, and encouragement at the tail end of this endeavor.

Last but not least are the hundreds of deaf people who completed my questionnaire, and the dozens who let me interview them; without your voices this project would not have come to be.

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CHAPTER I

INTRODUCTION

Society typically conveys two concurrent messages to people of various stigmatized social categories: 1) that they are members of a particular group (e.g., Latinos, disabled); and 2) that the group to which they belong is not as worthy as the majority. People who internalize both messages, conventional wisdom says, come to label themselves as members of a devalued group, and when they apply the majority's negative attitudes to themselves, they come to believe that they themselves are unworthy individuals. This formulation views people as passive recipients of the majority's messages. In contrast, other theories suggest that people are active agents and can choose to accept or reject society's labeling and/or negative attitudes. For example, some people who accept the label assigned to them by the majority will engage in active reformulation of the label's connotations (e.g., "Black is Beautiful"). The different strategies employed by persons of devalued social categories will have different effects on their self-esteem.

Several theories have presented various aspects of this general causal model analyzing the relationship between society and individual members of minority groups (e.g., Crocker & Major, 1989; Rosenberg, 1979; Tajfel, 1981). Most of the empirical literature on stigmatization and its effects involves members of ethnic and racial groups. This dissertation will show how this model can be applied to members of one non-ethnic minority group: Deaf people in the U.S. The more general literature on group identification and self-esteem among minority groups is presented first, followed by a review of the literature concerning deaf people.

Mechanisms Linking Societal Attitudes to Self-Esteem among Minority Groups

Minority groups are groups that are both smaller in size than the majority and disadvantaged compared with the majority. (This definition excludes disadvantaged groups that are not a numerical minority, e.g., women). For example, Blacks in the United States are economically and educationally disadvantaged compared to Whites; fat people are often negatively compared to thin people (see Crocker & Major, 1989, for a review), and deaf people have lower education and economic status compared to hearing people (Schein & Delk, 1974). Another important feature of minority group status is that the negative attitudes held by the majority are often expressed in negative stereotypes. Numerous studies demonstrate the existence of negative stereotypes of Blacks (Milner, 1975, 1981; Morland, 1969) and other racial and ethnic minorities (McKirnan & Hamayan, 1984; White & Sedlacek, 1987). Others have demonstrated stereotyping of non-ethnic minority groups such as people with physical and emotional disabilities (Altman, 1981; Furnham & Penderd, 1983; Grand & Strohmer, 1983), fat people (Allon, 1982; Hiller, 1981), gay men and lesbians (de Boer, 1978; Herek, 1984), and older people (Kite & Johnson, 1988; Kite, Deaux & Miele, 1991).

People have a tendency to categorize both themselves and others in order to facilitate processing of information about the world (Fiske & Taylor, 1991). There is a fundamental distinction, however, between how people categorize in- and outgroup members. Minority groups are viewed by the majority as outgroups. Ingroup members are perceived as more similar to the self than they really are and at the same time, differences among ingroup members are clearly noted. Outgroup members are perceived as more dissimilar to the self (of the majority person) than they really are, and are seen as very similar to each other (Fiske & Taylor, 1991; Mullen & Hu,

1989). These effects are not equally strong, however. The perception of outgroup homogeneity is stronger than the perception of ingroup heterogeneity (Mullen & Hu, 1989).

Tajfel (Tajfel, Flament, Billig & Bundy, 1971; Turner, Brown & Tajfel, 1979) and Turner (1987) view categorization as the fundamental process from which other group processes emerge. Using the 'minimal group paradigm', they repeatedly demonstrated how people categorize themselves and others as in- and outgroup members based on very minimal criteria (such as being assigned the number 40 or 50 to denote group membership). Even in the highly controlled setting of this research paradigm, participants discriminated in favor of ingroup members and against outgroup members. Turner concluded that "imposing social categorization upon people even on an explicitly random basis... produces discriminatory ingroup behavior, intragroup cohesion in the form of more positive attitudes towards and more reported liking of ingroup than outgroup members, ethnocentric biases in perception, evaluation and memory...and an altruistic orientation towards ingroup members" (1987, pp. 27-28).

Categorization can account for stereotypes that organize one's prior knowledge about other people who fall into certain socially defined categories. Certain behaviors and standards are expected of people on the basis of their race, sex, and physical characteristics, for example. In addition to their cognitive properties, stereotypes have affective and behavioral consequences (Fiske & Taylor, 1991). If members of 'minimal groups' express ingroup favoritism and discrimination against outgroup members, it would be reasonable to deduce that group categorization based on less minimal and more meaningful criteria (such as race, sex, or physical ability) will yield even stronger emotional reactions and social behaviors. This deduction is supported by a recent review of the literature on the perception of ingroup and

outgroup variability that shows that the ingroup-outgroup effect is larger for naturally-occurring groups than for groups created in the laboratory (Mullen & Hu, 1989). This effect is also supported by the vast literature on stereotyping, stigmatization and discrimination against members of various minority groups (e.g., Asch & Fine, 1988; Goffman, 1963; Jones, Hastorf, Markus, Miller & Scott, 1984; Wright, 1983).

Both theory and conventional wisdom suggest that members of minority groups internalize the majority's negative attitudes toward them and accept its labeling; these internalization and acceptance processes are hypothesized to result in low self-esteem. Several theories explain how this process may occur. According to the "looking glass self" (Cooley, 1956), members of stigmatized groups who are aware that they are regarded negatively by others will incorporate those negative attitudes into their self-concept, and consequently will have lower self-esteem. The self-fulfilling prophecy suggests that lower expectations that the majority has for minority group members result in lower performance, and therefore in lower self-esteem (Merton, 1948). Other theories suggest that the self-concept develops through efficacious interaction with the environment. They predict that conditions that block the opportunity to interact successfully with the environment may prevent the development of high self-esteem (Gecas & Schwable, 1983; see review by Crocker & Major, 1989).

The three theories described above all suggest a three-step process: 1) the majority labels and holds negative attitudes toward the particular minority group in question; 2) members of the minority group accept the label and internalize the negative attitudes; and 3) this acceptance and internalization result in low self-esteem (see Figure 1a). All three steps need to occur in order to conclude that minority group status results in low self-esteem. As already noted, there is much evidence indicating

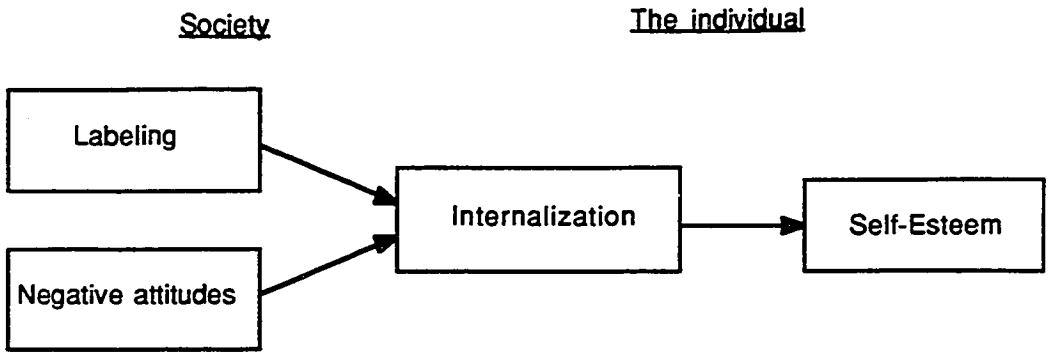


Figure 1a. The effect of stigmatization on self-esteem: A general model

that the majority holds negative attitudes toward various minority groups (step 1) (It is also clear that members of minority groups suffer from the majority's prejudice and discrimination resulting in poorer social, educational, economic, and political outcomes.) Evidence for the other two steps of this process, internalizing negative attitudes and labels, and lowered self-esteem as a consequence of this internalization, is more equivocal, especially regarding ethnic and racial minorities (Rosenberg, 1979).

Demonstrating that minority group members have lower levels of self-esteem than those in the majority would lend some support to the theories that predict low self-esteem among minority group members. Demonstrating that minority group members do not have lower self-esteem, however, would suggest that internalization of negative attitudes or labeling does not occur.

Contradictory Findings of Self-Esteem in Minority Groups

Many studies of racial and ethnic minorities in the U.S. (Clark & Clark, 1939; Milner, 1975, 1981; Morland, 1969), Europe (Giles & Pouesland ,1975), and Africa (Gregor & McPherson, 1966) have demonstrated low self-esteem among members of minority groups. These findings support the theories that predict lower self-esteem

among members of minority groups described earlier. Other studies, however, have failed to replicate this finding (e.g., Berry, Kalin & Taylor, 1977; Bourhis, Giles & Tajfel, 1973; Brigham, 1971; Friedman, 1969; Hraba & Grant, 1970; see also Rosenberg, 1979, for a review of the literature). There are three ways to reconcile these latter findings with the theories that predict low self-esteem: first, by noting inconsistencies in the measurement of self-esteem; second, by acknowledging that (at least) some minority group members are active agents rather than passive recipients of the majority's attitudes and labeling; and third, by showing how the three theories make untested assumptions.

Inconsistencies in the Measurement of Self-Esteem

Inconsistencies in the research findings on self-esteem among minority group members may be attributed to the failure to distinguish between personal self-esteem and collective self-esteem (Crocker & Major, 1989). Personal self-esteem refers to feelings of personal self-worth, that is, what has traditionally been measured as self-esteem in personality studies over the past several decades (Rosenberg, 1979). Collective self-esteem, on the other hand, refers to evaluations of the worthiness or value of the social group of which one is a member. Conceptually, one may hold one's social group in low esteem, yet have feelings of high personal self-worth. Empirically, measures of collective self-esteem and personal self-esteem only correlate moderately (Crocker & Luhtanen, 1990; Luhtanen & Crocker, in press; Porter & Washington, 1979), indicating that these two constructs are, indeed, distinct from each other.

Some early self-esteem studies used dolls of different colors to assess self-esteem of Black children (e.g., Clark & Clark, 1939). White and black dolls were presented and the child was asked to indicate which was the pretty doll and which was the ugly doll, and to tell which doll was more similar to him- or herself. Many

children picked the white doll as the pretty one, but stated that they were more similar to the black doll. More importantly, some children cried and appeared distressed when admitting that they were more similar to the black doll. Recent replications, nearly fifty years later, provide similar findings (e.g., Fine & Bowers, 1984).

Crocker and Major (1989) claim that the doll studies measured not personal self-esteem, but collective self-esteem, that is, the perceived regard towards one's group. In other words, Black children who said black dolls were uglier than white dolls correctly identified the negative regard White society held toward Black persons[1]. According to this formulation the children did not have low personal self-esteem (although personal self-esteem was not explicitly assessed). Crocker and Major suggest that studies that show comparable levels of self-esteem of majority and minority group members, on the other hand, measured personal self-esteem. Thus, it can be concluded that despite negative societal attitudes, ethnic minorities do not have lower levels of personal self-esteem.

Minority Group Members as Active Agents

Labeling. There are two ways in which stigmatized individuals may avoid the label of their minority group: by actively dissociating from the group and by fantasizing about being a member of the majority.

Dissociation from the group. Social identity is "that part of an individual's self concept which derives from his knowledge of his [sic] membership of a social group..." (Tajfel, 1981, p. 255). According to Social Identity Theory (SIT) an individual will tend to remain a member of a group if this group has some contribution to make to the positive aspects of his or her social identity (i.e., contribute positively to self-esteem). If group membership does not make a positive contribution to one's self-esteem, the individual will attempt to leave the group, unless leaving it is

impossible. For most minority group members, physically leaving their group is not a viable option. Because people cannot cease to be Black or disabled, for example, they may attempt to psychologically leave their group by denying membership in it, or by claiming that the negative characteristics associated with the group do not apply to them. People may be aware of, and even agree with the negative stereotypes toward their group, and yet not feel that these stereotypes characterize themselves or that the label is relevant to themselves (Rosenberg, 1979).

Most older people, for example, believe that in general old people are not bright, alert, open-minded and sexually active, but indicate that they themselves are (Harris, 1975). In the post World War One era, many Jews manifested "Jewish self-hatred" (Lewin, 1948), agreeing with the non-Jewish majority's stereotypes of Jews (e.g., as "loud", "pushy", "mercenary") but claiming that these stereotypes did not characterize them. Members of various ethnic groups in Indonesia agreed with the negative characterization of their group but rejected it for themselves (Jaspers & Warnaen, 1982). Despite minority membership based on some "objective" characteristics (age, race, physical ability), some people consider themselves members of a more valued group (the majority) and may show majority group affiliation that is stronger than that of 'legitimate' majority members (Breakwell, 1979); they exhibit greater bias in favor of the majority, and are hypercritical of the minority group to which they belong. Thus, SIT would predict that members of the minority who dissociate from their minority group and strongly associate with the majority would have comparable levels of self-esteem to that of majority group members.

Fantasy. Another way to escape society's labeling is through fantasy. Because membership in a devalued social group may be perceived as a threat to one's self-esteem, members of a minority group may fantasize excessively about being members

of the majority, and thus temporarily escape the unpleasant reality of minority group membership. "Fantasy has the power to wish the threat away and replace it with a more acceptable form of reality" (Breakwell, 1987, p. 88).

Denial of the label assigned to oneself by the majority and fantasizing about being a member of the majority are both related to group identification. If a person regards the label assigned to him or her as relevant to the self, and does not fantasize about belonging to the majority, he or she may be considered to be identified with the group. Regarding the label as irrelevant to oneself or fantasizing about belonging to the majority may be conceptualized as disidentification with the group. These two processes disrupt the relationship, originally assumed inevitable, between the majority's labeling and one's acceptance of this label (see Figure 1b).

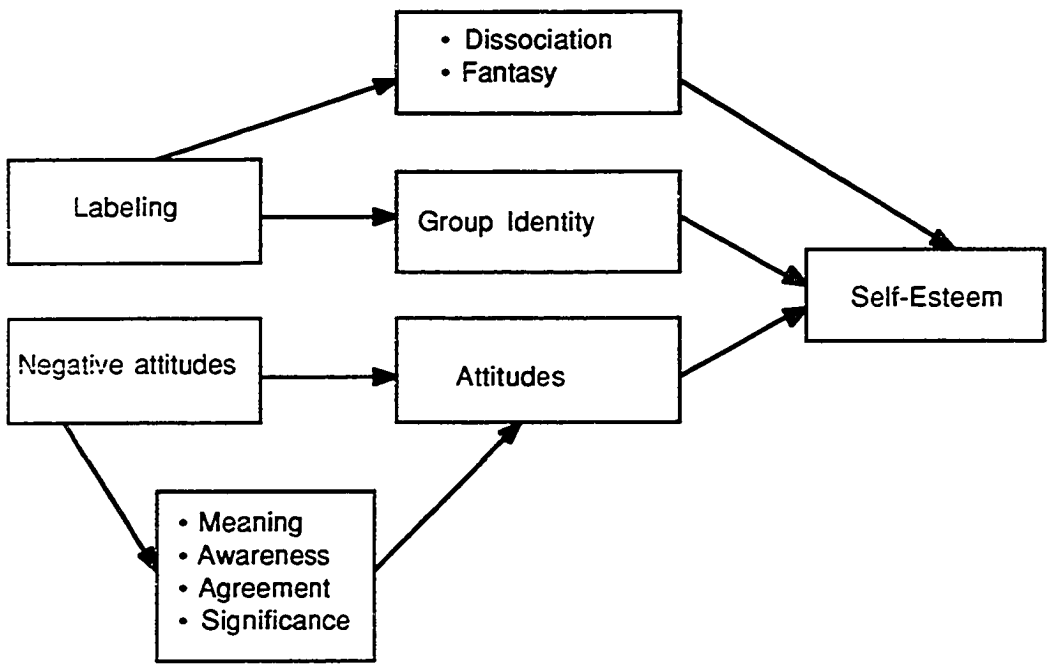


Figure 1b. The effect of stigmatization on self-esteem: A mediation model

Attitudes. Another way in which minority group members act as agents is by engaging in active cognitive reconstruction of the label's meaning (Tajfel, 1981). This is best exemplified by the slogan "Black is beautiful". By coining this expression, members of the Black minority changed the meaning of the label "Black". The (older) meaning assigned to "Black" by the White majority was negative ("Black is ugly"); the new meaning, assigned by Black people themselves, has now turned positive. This change in the meaning of the label accompanied the "Black Power" movement that sought to bring about social changes for Blacks and other minorities.

The label's meaning is related to the attitudes the individual holds toward his or her group. A person who agrees with the meaning assigned to the label by the majority accepts the majority's negative attitudes toward his or her group. On the other hand, the person who disagrees with the label's traditional meaning will have positive attitudes toward his or her group.

Untested Assumptions Made by the Theories

As shown in Figure 1b, three variables mediate between society's attitudes and the attitudes the individual holds toward his or her group: awareness, agreement and significance. Theories that predict internalization of society's negative attitudes by minorities make four assumptions: (a) minority group members are aware of these attitudes, (b) they agree with the attitudes, (c) the persons holding the negative attitudes are important (significant) to the minority group member, and (d) these negative attitudes are perceived as personally relevant (Rosenberg, 1979). The first three assumptions are relevant to the internalization (or lack thereof) of the majority's negative attitudes towards one's group. The fourth assumption, that of relevance, deals with the acceptance or rejection of society's labeling, and was discussed in the previous section.

Awareness. People from a minority group can hardly be unaware of the attitudes, prejudice and discrimination directed at them by the majority. On the other hand, children of ethnic and racial minorities are raised by a family and within a community of members of their own group. They are therefore exposed primarily to other members of their group and to these individuals' attitudes. At least for the first few years of their lives, ethnic minority children may be unaware of the majority's negative attitudes toward them (Rosenberg, 1979). This initial protection may allow enough time for a child to develop a positive self-image that will not be shaken later when the majority's negative attitudes are encountered.

Agreement. Even when aware of the majority's negative attitudes, members of racial and ethnic minorities do not necessarily agree with these attitudes. Different ethnic groups in Indonesia, for example, evaluated themselves more favorably than did outgroups (Jaspers & Warnaen, 1982). Thus, the assumption of agreement is not always met. The reason, according to Rosenberg, is obvious: "The individual's intimate contact with members of his [sic] own group makes the complete acceptance of these stereotypes a virtual impossibility... no black can possibly believe [the stereotypes about him- or herself] to be the case, for it obviously contradicts his [sic] direct and immediate experience" (1979, p. 164).

Significance. The third assumption, the significance of the negative attitudes, may not be met for similar reasons. Correlations between the perceived attitudes of significant others (parents, teachers, friends) and one's global self-esteem are very high (Rosenberg, 1979). A young child from an ethnic minority group is normally surrounded by parents, siblings and friends who are members of the same group. Even if the child is aware that the majority holds negative attitudes toward his or her group (through exposure to the media, for example), these attitudes may be secondary in

importance relative to those of family and friends.

If the three assumptions outlined above are met, it could be expected that a person will internalize societal negative attitudes toward his or her group, and will hold negative attitudes toward the group. This will result in low self-esteem. If, however, the assumptions are not met, the minority group member would not internalize society's negative attitudes, would hold more positive attitudes toward his or her group, and would have high self-esteem. High levels of self-esteem among minority group members found in some studies fail to support the process suggested by the three theories presented earlier (predicting low self-esteem among members of minority groups).

So far the discussion has addressed the psychological processes affecting group identification and attitudes toward one's minority group (Figure 1b). What happens once a person identifies with his or her stigmatized group? According to the three theories such identification would result in low self-esteem. A newer formulation, however, suggests that this identification will enhance self-esteem (Crocker & Major, 1989). The following section discusses the consequences of group identification for the minority member's self-esteem, and the ways in which higher self-esteem is achieved.

How Group Membership Protects Self-Esteem

When people accept the label assigned to them by the majority, they may be regarded as identified with their group. Once members identify with their minority group, the group may serve to protect their self-esteem. This may be accomplished in several ways, depicted in Figure 1c: (a) By attributing negative interpersonal and performance feedback to prejudice against their group; (b) By comparing their

performance to that of other ingroup members, rather than to the relatively advantaged outgroup; (c) By selectively devaluing those dimensions on which their group fares poorly; and (d) By emphasizing those dimensions on which their group excels (Crocker & Major, 1989)[2].

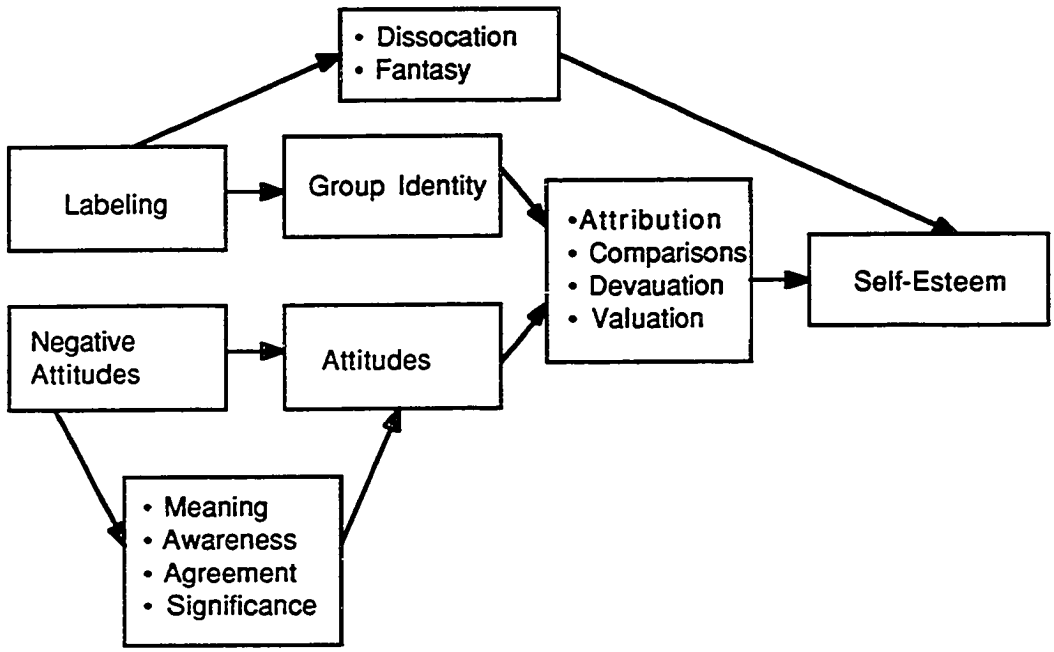


Figure 1c. The effect of stigmatization on self-esteem: Incorporating Crocker & Major's model

Attributing Negative Feedback to Prejudice Against the Group

Attributing failure to internal causes such as lack of ability can damage self-esteem (Besgall & Snyder, 1988; Duval & Duval, 1987). Believing that the cause of failure is instead external may protect one's self-esteem. If a Black person fails to get a job, for example, he or she may attribute this to "racism" rather than to lack of skills in the particular area. Findings of a recent study (Crocker, Voelkl, Crocker, Testa & Major, 1991) showed that following negative feedback, Black respondents' self-esteem was lower if they believed their evaluator could not see them than when they believed their

race was visible. Presumably, participants who were seen by a White evaluator could attribute the negative evaluation to racism, whereas participants who were not seen were forced to conclude that the negative evaluation was more personal. In another study, participants who received negative feedback about their performance were more likely than those who received positive feedback to attribute their performance to external causes, using various excuses (Basgall & Snyder, 1988). Given that minority group members are likely to have poorer outcomes than the majority, attributing these poorer outcomes to external causes such as discrimination, rather than to internal causes, may protect one's self-esteem.

Ingroup Comparisons

If minority group members perform less well in some domain vis-a-vis the majority, comparing oneself to the majority will have a deleterious effect on self-esteem. In contrast, comparing oneself to others who perform less well can enhance self-esteem. Black children in desegregated schools, for example, earned better grades than Black children attending Black schools, but their self-esteem was lower (Rosenberg, 1979; see also Stephan, 1978; St. John, 1975). Rosenberg concluded that the mechanism of ingroup comparisons may have operated to protect the self-esteem of children in a segregated settings despite lower levels of academic performance[3].

Selective Devaluation of Majority Attributes

The impact of performance feedback on self-esteem is mediated by the importance of the dimension to the self-concept. If academic studies are devalued, for example, poor academic performance will not have a negative effect on one's self-esteem. A minority group member may choose to value or devalue any domain of life; choosing to devalue a domain in which one performs poorly will serve to protect self-esteem. For example, Black elementary school students were found to have lower academic self-

esteem than White students; their levels of global self-esteem, however, were comparable to those of Whites (Hare & Castenell, 1985). One possible basis for such findings is that Black students devalue academic performance relative to White students, and that other factors contribute to the comparable global self-esteem.

Selective Valuation of Minority Attributes

Self-affirmation theory (Steele, 1988) suggests the existence of a self-system whose purpose is to maintain one's self-image as competent, good, stable, etc. When faced with information that threatens this image, a person will affirm other aspects of the self, aspects that may be irrelevant to the threatening information. This self affirmation restores one's positive self-image. The minority group member who recognizes the groups' and his or her personal poorer outcomes compared to the majority (e.g., in education and economic status) may choose to affirm or value other domains of life (e.g., family, community) in order to restore a positive self-image.

Summary. Membership in a minority group per se does not affect self-esteem. Rather, the psychological mechanisms employed (or not employed) by the minority group members will determine whether self-esteem will be hampered or enhanced (see Figure 1c).

Some of the theories presented make an overall assumption about the psychological passivity of minority group members in predicting internalization of the majority's labeling and negative attitudes. Other theories outlined various processes that members of minority groups may employ in order to protect their self-esteem despite poorer educational, economic, and political outcomes. Specifically, active processes may operate in two ways. A person may deny membership in the minority group (Tajfel, 1981); alternatively, if minority group membership is accepted, the person may engage in various psychological processes and behaviors to maintain high

self-esteem (Crocker & Major, 1989; Rosenberg, 1979; Tajfel, 1981). Tajfel's Social Identity Theory (1981) takes a broader approach in that it proposes two routes that may be taken to achieve high self-esteem: that of dissociation from the minority group, and that of identification with it[4]. Crocker and Major's (1989) formulation elaborates on one aspect of Tajfel's model, that of group identification. These different approaches have implications for the hypotheses derived from each theory. SIT would predict that both those who identify with their group and those who dissociate from it would have comparable levels of self-esteem, whereas Crocker and Major's model would predict that those who identify more strongly with their group would have higher self-esteem than those who do not identify with their group (through the greater use of the four psychological mechanisms: ingroup comparisons, attribution of failure to prejudice, valuation of minority attributes, and devaluation of majority attributes).

Deaf People as a Minority Group

Most of the research on self-esteem among minority groups has focused on ethnic minorities. Children of ethnic minorities grow up within a community of people who are similarly stigmatized and thus other group members may serve as a buffer against stigmatization. These children may not be aware of society's attitudes, and if they are aware, they may not agree with these attitudes because of higher exposure to the minority view or a heavier weighting of the opinions of relatives and friends compared to those of the more distant majority (Rosenberg, 1979).

Children of non-ethnic minority groups may have very different experiences. A disabled child, for example, is usually born to nondisabled parents and lives in a community of able-bodied people. The majority's negative evaluation of disabled

individuals is probably accepted by many people the child encounters, and therefore the immediate social environment does not serve as a buffer as in the case of ethnic minorities. This child is likely to be much more aware of society's negative attitudes than the ethnic minority child, and will be more likely to agree with those attitudes. Further, even the attitudes of those people closest to the disabled child are likely to be negative. Thus, children with disabilities will probably be aware of and agree with society's negative attitudes toward the disabled and as a result, may choose not to identify with other people with disabilities. According to Crocker and Major's model (1989), people who are viewed by others as members of a stigmatized group but who do not identify with it may suffer low self-esteem, as they are not likely to employ the four protective mechanisms described earlier. Therefore, they are more vulnerable to society's stigmatization.

Deaf people are both different from and similar to ethnic minorities. Unlike most ethnic minority children who are born and raised within a minority community, most (90%) deaf children are born to hearing parents and usually live, at least initially, in a hearing environment. They are likely to be exposed to negative attitudes toward deafness from a very young age. Deaf adults, however, like ethnic minorities, share a language (American Sign Language or ASL), manifest group identification, are endogamous (90% of deaf persons marry within the deaf community), and share organizational networks (Reagan, 1985). Deaf individuals thus have a community with which they may choose to identify. Deaf people also suffer from society's negative stereotypes, prejudice, and discrimination (Schein & Delk, 1974).

The model depicted in Figure 1c outlines how members of a minority group come to identify (or choose not to identify) with their group and to hold either negative or positive attitudes toward it. Identification with the group is believed to lead to the

employment of four psychological mechanisms to protect self-esteem in the face of the majority's stigmatization. The following sections will apply the model drawn in Figure 1c to deaf people. First, the literature on attitudes toward the deaf will be presented. Next, the research on self-esteem among the deaf will be reviewed. And finally, the family and school environments of deaf people will be discussed to show how they may hinder or enhance self-esteem.

Attitudes toward Deaf People

Deafness is a rare occurrence, estimated at no greater than 600,000 profoundly deaf people in the United States (Brown, 1989; Stewart, 1991)[5]. Therefore, most hearing people have never personally encountered a deaf person and many are unaware of the characteristics of deaf people (e.g., "deaf" voice). Because they lack knowledge of deafness, many hearing people hold abstract and unrealistic ideas about the deaf and about possible social interactions with them. Consequently, a number of research studies show that attitudes toward deafness and deaf people tend to be neutral rather than either strongly positive or negative (Ferguson, 1970; Schroedel & Schiff, 1972). This finding may be misleading, however, as these studies examined attitudes regarding hypothetical interactions with deaf people rather than real experiences with deaf individuals. More realistic and ecologically valid presentations of deaf persons in studies reveal more negative attitudes (Blood & Blood, 1982, 1983; Cowen, Bobrove, Rockway, & Stevenson, 1967; Dickert, 1988; Haley & Hood, 1986; Kottke, Mellor & Schmidt, 1987; Newberry & Parish, 1987).

When presented with a description of the communication problems of real deaf persons, hearing respondents displayed more negative attitudes than when presented only with the information that someone was deaf (Kottke, Mellor & Schmidt, 1987). In

a laboratory experiment college students who scored high on a scale measuring negative attitudes toward deaf people (including items such as "The deaf generally have a less mature personality than the hearing") rated confederates wearing hearing aids more negatively than the same confederates without them (Cowen, Bobrove, Rockway, & Stevenson, 1967). Studies that presented slides, audiotapes, or videotapes of actual deaf people provide evidence that both adults (Blood & Blood, 1982; Dickert, 1988) and children (Blood & Blood, 1983; Haley & Hood, 1986; Newberry & Parish, 1987) hold negative stereotypes of deaf people. In particular, when targets wore a hearing aid and had a "deaf voice"--characteristics that realistically are associated with deaf people--they were evaluated more negatively. Especially alarming is the fact that negative stereotypes were expressed by professionals who work with deaf populations, including teachers (Blood & Blood, 1982) and mental health professionals (Dickert, 1988). Deaf children are therefore exposed to negative attitudes not just of family members and other hearing people who have no experience with deafness, but from the professionals who are entrusted with helping them.

The psychological literature on deafness is fraught with descriptions of deaf children and adults as immature, impulsive, egocentric, and dependent (Delgado, 1982; Lane, 1988). Many hearing people believe that deaf people are less smart or less intelligent than hearing people (as manifested by the expression "deaf and dumb"[6], that sign language does not enable expression of abstract ideas, or that deaf people are capable only of concrete but not abstract thinking (Lane, 1988; Meadow, 1969). Instead of reflecting what deaf people are like, these descriptions more likely reflect the paternalistic attitude expressed by hearing professionals toward deaf people (Lane, 1988).

Whereas most hearing people have never encountered a deaf person, deaf people

have extensive contact with hearing people. Therefore, deaf people's perception of hearing people's attitudes is probably a better indicator of the latter's attitudes toward the deaf than hearing people's own reports. Accordingly, in one study deaf respondents believed that hearing people hold more negative attitudes toward deafness than hearing respondents actually reported (Furnham & Lane, 1984). Deaf people also report that most hearing people are shocked and scared when they hear a deaf person's voice, are impatient in repeating their verbal messages to the deaf person, and shout unnecessarily (Bat-Chava, 1989).

Self-Esteem among the Deaf

The two most important socialization agents to which deaf children are exposed are the family and the education system. In both these institutions, deaf children encounter primarily hearing people and their attitudes about deafness. These two agents are worth detailed consideration to examine their possible effects on self-esteem.

The Family Environment

The family environment is a particularly critical factor in shaping the life of deaf children. As mentioned earlier, 90% of all deaf children are born to hearing parents (Schein & Delk, 1974). Most hearing parents have never met a deaf person or thought much about deafness before having their child diagnosed. First encounters with health professionals (physicians, audiologists, speech therapists) and educators are likely to shape parents' attitudes toward their child's deafness. Many professionals hold a medical model of deafness, regarding it as pathology, a tragedy to be treated, cured, or adjusted to, rather than a human variation[7].

Parents are often advised not to sign or gesture to their deaf child or to let the

child sign or gesture, but to talk to their child and insist on the child vocalizing in return (Jacobs, 1980; Schlesinger & Meadow, 1972). Many deaf adults, in telling the story of their childhood in a hearing family, comment that the insistence on speech and speech-reading and the prohibition on using signs indicated to them that their deafness was not accepted by their families (e.g., Bowe, 1986). The message sent to children in such an environment is that something is wrong with them, as illustrated by this individual's experience:

> My parents sent me an unmistakable signal that my deafness was "Treif"...not Kosher. My parents wanted me to have the same things as my brother. They wanted me to develop language, they wanted me to be an intellectual, work, go to school...different things. So they worked like dogs to give me [various classes] three times a week, then when I finished with that, a speech teacher 5 times a week...So much work! But nothing comes free. You know the devil Mephistopheles who said to Faust, "I'll give you everything, you give me your soul"? Well, the devil said to me, "I'll give you speech, but I'll make life miserable for you".... I read books, magazines, newspapers, but the unmistakable signal that my parents were sending me was that I had to overcome my deafness. That my deafness was "Treif". As a small child I didn't know the difference between a part and the whole. So I felt it was me that they rejected, that there was something terribly wrong with me. My parents came to realize what had happened later. They wanted me to meet other deaf children, but I didn't want to, I would look down on them, they weren't good enough for me... because [I] felt [I was]n't deaf..." (Bat-Chava, 1989).

Not all deaf children grow up in such an environment. About 10% of deaf children are born to and raised by deaf parents (Schein & Delk, 1974). The experience

of these deaf children is likely to be similar to the experience of ethnic minority children. Group members--the family and the deaf community--may protect them, at least initially, from the negative attitudes society holds toward deaf persons. Consequently, they would probably be less aware of these attitudes, agree with them less, and consider them less significant than would deaf children who grow up in hearing homes.

The composition of deaf and hearing family members may vary as well. Some deaf children are the only deaf persons in their family, whereas others have deaf siblings or relatives. The presence of deaf family members will, presumably, will serve as a buffer against the hearing society's negative attitudes.

Hearing families choose to raise their deaf children in different ways. Some expose their deaf children to other deaf children and adults, whereas other families socialize their children in a strictly hearing environment. Further, this choice may change during the child's life. Some parents initially insulate their deaf child from other deaf children, for example, but later change their minds and introduce the child to other deaf children and adults (cf. Spradley & Spradley, 1978). The greater the contact a child has had with other deaf children and adults outside the family, the more protected he or she may be from society's negative attitudes toward deaf people.

A related feature of the family environment is the choice of communication method used in the home. Most deaf parents use American Sign Language (ASL) with their children, whereas most hearing families use spoken English with their deaf children (Schlesinger & Meadow, 1972; Swisher, 1989). ASL is considered the natural language of the deaf in this country (Higgins, 1980)[8]. In addition to ASL and spoken English, other modes of communication are used to communicate with deaf children and adults. These methods can be ordered along a continuum of "deafness-hearing orientation", depicted in Figure 2a. Close to ASL is Total Communication, which

Deafness Orientation						Hearing Orientation
American Sign Language (ASL)	---	Total Com-munication	---	Pidgin Sign English (PSE)	---	"Rochester" Method (Finger-spelling)	---	Manually Coded English (MCE)	---	Oral English

Note. PSE is also known as "contact language."
MCE is a "family" of methods, including SEE1, SEE2, LOVE, Signed English, and Cued Speech.

Figure 2a. Methods of communication along a "Deaf-Hearing Orientation" continuum.

uses all available modes of communication to convey information: signing, lip movements, voice and fingerspelling; next on the continuum is Pidgin Sign English (PSE), which uses a combination of signs from ASL, usually with English syntax. Next is the "Rochester Method", which uses fingerspelling only to convey information. Toward the hearing orientation end of the continuum are methods that represent sound by visual means, called Manually Coded English (MCE). Under this umbrella category are communication systems such as Cued Speech and Signing Exact English (SEE1 and SEE2, and LOVE [Linguistics Of Verbal English]). MCE systems were invented by hearing educators to communicate with deaf children and teach them English in a visual mode. These methods are rarely used by deaf adults to communicate with each other (Swisher, 1989).

Different members of the family may use different modes of communication with the deaf child. Deaf people often report that their mothers made a stronger attempt to learn sign language than did their fathers (Bat-Chava, 1989; Swisher, 1989). In addition, the mode of communication in the home can change over time. Some parents

choose spoken English first, and then learn PSE to communicate in sign with their children. It follows that the more "deafness-oriented" the combination of communication modes used in the home, the more the child should experience acceptance of himself or herself as a deaf person and protection from the hearing society's negative attitudes. Acceptance and use of sign may be viewed as acceptance of one's deafness, whereas rejection of sign and the refusal to use it may indicate rejection of deafness and, by implication, rejection of the deaf person himself or herself.

The School Environment

Another crucial factor in the socioemotional development of deaf children is the type of school they attend. Deaf children are placed in a number of different types of educational environments, that, like the communication modes, can be ordered along a deafness-hearing orientation continuum (Figure 2b).

On the extreme end of the deafness orientation are residential schools for the deaf. The child studies and lives with other deaf children, returning home only for weekend and/or holidays. Next on this continuum are day schools for the deaf, where the child studies and associates with deaf children during the day, but lives with the family. Next lie special education classes for deaf children within hearing schools. In this context, the child studies with other deaf children in a self-contained classroom, but is exposed to hearing children during other times, such as recess or meals. Finally, on the hearing end of the continuum is mainstreaming, a context in which deaf children are

Deafness Orientation				Hearing Orientation
Residential School	Deaf day School	Self- contained Deaf Classes	Partial Mainstreaming	Full Mainstreaming

Figure 2b. Educational settings along a "Deaf-Hearing Orientation" continuum.

placed on an individual basis in regular classrooms with hearing children. Mainstream programs themselves vary a great deal, usually with the number of deaf children in the particular school. In some schools the deaf child will be a solo, or one of very few deaf students, and will be likely to study the vast majority of his or her classes with hearing students (full mainstreaming). Other hearing schools have larger numbers of deaf students who will be placed in classes with either hearing or other deaf students (partial mainstreaming). These educational environments are not mutually exclusive. Some deaf children attend a residential school and are bused to a public school to be mainstreamed in a few academic subjects during the day (Dorrance, 1986). More typically, children who are placed in special education programs will be mainstreamed according to their ability, studying some subjects in hearing classrooms and other subjects with deaf children. Further, deaf children may change educational environments as they develop, experiencing multiple settings with different degrees of deafness orientation. For example, a child may be enrolled in a residential school first, then partially mainstreamed, then completely mainstreamed. Or deaf children may first attend a day school and later enroll in a residential school.

Two other aspects of the educational environment should be considered. One is the presence of deaf adults in the school including teachers, teaching assistants, and staff. Deaf adults provide role models to deaf children. The more deaf adults a child knows, the larger the diversity of roles with which he or she will be presented. Knowing deaf adults who productively participate in society should enhance deaf children's acceptance of their own deafness and produce more positive attitudes toward others who are deaf. Deaf adults also expand the community of deaf people who serve as a buffer against the majority's negative attitudes. The presence of deaf adults in mainstream education is virtually nil[9]. In special education, day-schools, and residential schools their

numbers vary. Once again, a stronger presence of deaf adults will indicate a greater "deafness orientation" of the school setting.

Another aspect of the educational environment is the mode of communication used in the school. Some schools use oral English for instruction, while others use fingerspelling or PSE. As in the home, not all people in the environment use the same mode of communication. Teachers may use signed English, for example, while teaching assistants and staff use ASL. As in the home, the use of ASL may send a signal to deaf children that their deafness is accepted, while the use of English (whether in oral or some visual representation form) indicates rejection of deafness. Acceptance will facilitate identification with the deaf community which will, in turn, lead to higher self-esteem.

A further consideration is whether the modes of communication used at home and in the school are congruent. Deaf parents who sign at home may send their child to an oral school, or hearing parents who do not sign will send their child to a school where sign language is used. There is no literature documenting the effect of this agreement or discordance between home and school modes of communication on the child's development. The issue of congruence as opposed to the simple effects of the degree of deafness orientation in the home and in the school raises some fascinating questions. For example, can inconsistent modes--mixed messages about the acceptability of deafness--result in lower personal or collective self-esteem than two "matched" environments? What is the relative importance of the two environments in contributing to self-esteem? This study will attempt to document and assess their additive and joint influences.

Deafness-related variables

In addition to family and school environments, deafness itself may have an impact

on self-esteem. Degree of hearing loss is one important variable. Those people who have more residual hearing are likely to be able to function better in the hearing world. Their identification with deaf people may thus be lessened and so would be their self-esteem. On the other hand, if self-esteem is derived from successful functioning in the mainstream, those able to hear more would have higher self-esteem. Age at onset of deafness may have a similar influence. If deafness is acquired early, learning a spoken language is a monumental task. Those who become deaf after having acquired a spoken language, however, may be better able to be integrated into the mainstream.

To examine the effect of these variables on self-esteem, a literature review about self-esteem in the deaf was conducted.

Empirical Research on Self-Esteem in the Deaf: A Meta-Analytic Review

Not much research has been conducted on the self-esteem of deaf individuals. A search of both the published and unpublished literature yielded 22 studies on this topic, summarized in Table 1, Appendix A. These studies included a host of variables whose effect on self-esteem was studied: hearing status of the research participants, hearing status of participant's parents, type of school attended, and modes of communication used in the home and in school. Some studies included other deafness-related variables (e.g., age at onset of deafness, degree of hearing loss), as well as demographic variables (e.g., age, sex). A meta-analysis of this literature was conducted to quantitatively asses the effect of these variables on self-esteem across the different studies. Only studies in which respondents indicated how they felt about themselves are included in this review. Studies in which others (such as parents or teachers) were asked to comment about the deaf person's (usually a child) self-image are not included, as they do not measure self-esteem. In studies that reported multiple measures of self-esteem

the general or overall self-esteem score was used.

Effect sizes were calculated to determine the effect that fourteen variables had on self-esteem (see Tables 2.1 - 2.14). The effect-size measure used was Cohen's *d* (1988), a standardized statistic that expresses the magnitude of the relationship between any two variables (here, between self-esteem and several other variables) regardless of unit of measurement. In addition to *d*'s, Table 2 lists the 95% confidence interval for each study and the overall analysis. This interval provides an indication of the accuracy or reliability of the estimated effect size (Rosenthal, 1984). Also reported is the test of significance (*p*) of the difference between the obtained effect size and the effect size expected under the null hypothesis of no relationship.

Comparisons between deaf and hearing. Seven studies compared the self-esteem of deaf people with that of hearing people. These comparisons were explicitly made in two studies by including a hearing sample in the research (Brunschwig, 1936, studies I & II). In five other studies this comparison was made by comparing deaf respondents' scores to the scores of the (hearing) normative sample on which the test was standardized (Casey, 1981; Garrison, Tesch & DeCaro, 1978; Marcus, 1985; Ndurumo, 1980; Sussman, 1973). The average effect size was $d = -.42$, $p < .001$, indicating that deaf people had lower self-esteem than hearing people (Table 2.1). This result should be interpreted with caution, however. Three of the seven studies used the Tennessee Self-Concept Scale (TSCS) in English as the measure of self-esteem. This scale uses idiomatic language (e.g., "I'm all thumbs") that may be unfamiliar to deaf people. Garrison, Tesch and DeCaro (1978) report that self-esteem was correlated with reading ability such that those deaf people who understood the TSCS better had higher scores on it. Studies using other measures could yield different results.

Table 2.1

Meta-Analysis: The Effect of Hearing Status on Self-Esteem

Study	*d*	95% CI	*r*	*p*
#Brunschwig, I (1936)	+0.1503	-0.05 / +0.35	+.0751	.1343
#Brunschwig, II (1936)	-0.3998	-0.52 / -0.28	-.1961	.0000
Casey (1981)	+0.3451	+0.11 / +0.58	+.1701	.0000
Garrison et al (1978)	-0.8533	-1.06 / -0.65	-.3928	.0000
Marcus (1985)	-0.2460	-0.46 / -0.03	-.1222	.0010
Ndurumo (1980)	-2.2094	-2.50 / -1.92	-.7417	.0000
Sussman (1973)	-0.4445	-0.64 / -0.25	-.2172	.0000
Overall:	-0.4165	-0.49 / -0.35	-.2039	.0000

Notes.

1. *d*'s are positive for differences in the deaf direction.
2. Three studies do not provide enough information to calculate effect size: Blanton & Nunnaly (1964; d < h), Craig (1965; d > h), and Wright (1981; d = h).
3. Two studies used hearing participants for the comparison s(#); others compared deaf participants to the standardizing hearing sample.

Family-related variables. Three variables were examined: parents' hearing status; mode of communication used in the home; and the family's socioeconomic status.

Six studies have considered the effects of parents' hearing status on their children's self-esteem. The average effect size was $d = .21$, $p < .001$, such that children of deaf parents had higher self-esteem than children of hearing parents (Table 2.2). The communication method used in the child's family (where parents were hearing) was examined in four studies, yielding an average effect size of $d = .23$, $p < .003$. This indicates that self-esteem was higher among deaf people whose parents used sign language at home compared to those who used the oral method (Table 2.3). Both of these factors support the conclusion that higher deafness orientation of one's

family results in higher self-esteem. Socioeconomic (SES) status was considered in four studies. The average effect, d = .11, was not significant (p < .18; Table 2.4).

Table 2.2
Meta-Analysis: The Effect of Parents' Hearing Status on Self-Esteem

Study	*d*	95% CI	*r*	*p*
Cowan (1981)	+0.0398	-0.17 / +0.25	+.0200	.7096
Marcus (1985)	+0.3021	-0.14 / +0.75	+.1505	.1390
McMahon (1985)	+0.2167	-0.30 / +0.73	+.1084	.2445
Schlesinger & Meadow	+0.3193	+0.01 / +0.63	+.1583	.0287
Sussman (1973)	+0.3442	-0.20 / +0.88	+.1706	.0523
Yachnik (1985)	+0.7326	+0.19 / +1.27	+.3482	.0079
Overall:	+0.2103	+0.07 / +0.35	+.1046	.0013

Note.
d's are positive for differences in the deaf direction.

Table 2.3
Meta-Analysis: The Effect of Family Mode of Communication on Self-Esteem

Study	*d*	95% CI	*r*	*p*
Barsky (1987)	+0.2696	+0.01 / +0.53	+.1340	.0263
Cowan (1981)	+0.1797	-0.06 / +0.42	+.0900	.1395
Larsen (1984)	+0.2794	-0.29 / +0.85	+.1402	.2855
Marcus (1985)	+0.2429	-0.25 / +0.73	+.1219	.3112
Overall:	+0.2279	+0.07 / +0.39	+.1132	.0032

Note.
d's are positive for differences in the sign direction.

Table 2.4

Meta-Analysis: The Effect of Socioeconomic Status on Self-Esteem

Study	*d*	95%Ci	*r*	*p*
Ferraro (1983)	+0.4454	+0.09 / +0.80	+.2200	.0137
#McMahon (1985)	-0.0659	-0.30 / +0.17	-.0331	.5874
Schlesinger & Meadow	+0.2785	-0.08 / +0.64	+.1388	.1274
@Warren (1983)	-0.0158	-0.38 / +0.35	-.0080	.9318
Overall:	+0.1079	-0.05 / +0.26	+.0539	.1761

Notes.

1. *d*'s are positive for differences in the High SES direction.
2. #: This d is averaged over four indicators's correlations with self-esteem: mother's education (r = -.13), father's education (r = -.17), mother's occupation (r = .04), and father's occupation (r = .13).
3. @: This d is the average of two effects: between high SES and medium, and between medium and low SES.
4. Another study reported some data on SES, but not enough information was provided to calculate effect size: Yachnik (1985; high = low).

School-related variables. Three variables were analyzed: type of school attended; mode of communication used in the school; and intelligence. Eight studies considered the effects of current or previous school placement on the self-esteem of deaf people. The average effect size was not significant, $d = -.10$ ($p < .11$; see Table 2.5). Method of communication used in school was related to self-esteem, $d = .41$, $p < .001$, such that children attending schools in which sign language was used had higher self-esteem than those attending schools that used the oral method (Table 2.6). Other educational and intelligence-related variables were considered in six studies. Higher intelligence (as indicated by IQ scores, reading ability, or educational level in adulthood) was related to self-esteem, $d = .26$, $p < .001$, such that those with higher intelligence had higher levels of self-esteem (Table 2.7).

Table 2.5

Meta-Analysis: The Effect of Type of School on Self-Esteem

Study	*d*	95% CI	*r*	*p*
Cowan (1981)	-0.1197	-0.33 / +0.09	-.0600	.2636
Ferraro (1983)	+0.7188	+0.21 / +1.23	+.3420	.0061
#Green (1978)	-0.3191	-0.83 / +0.19	-.1596	.2212
Larsen (1984)	-0.0655	-0.46 / +0.33	-.0330	.7432
Ndurumo (1980)	-0.2458	-0.76 / +0.27	-.1235	.3389
#Sarfaty & Katz (1978)	-0.5753	-1.30 / +0.15	-.2834	.1192
Schlesinger & Meadow	+0.0165	-0.30 / +0.34	+.0083	.9160
Sussman (1973)	-0.3643	-0.73 / -0.00	-.1802	.0402
Overall:	-0.1049	-0.23 / +0.02	-.0524	.1058

Notes.

1. *d*'s are positive in the direction of higher school deafness orientation (DO).
2. #: These d's are the average of two effects: between a school with high DO and medium DO; and between a school with medium DO and low DO.
3. Three other studies do not provide enough information to calculate effect size: Craig (1965; residents > day), McMahon (1985; no effect), and Yachnik (1985; no effect).

Table 2.6

Meta-Analysis: The Effect of School Mode of Communication on Self-Esteem

Study	*d*	95% CI	*r*	*p*
Barsky (1987)	+0.4889	+0.17 / +0.81	+.2381	.0001
Gray (1980)	-0.0521	-0.82 / +0.72	-.0269	.8941
Overall:	+0.4093	+0.11 / +0.70	+.2005	.0005

Notes.

1. I's are positive for differences in the sign direction.
2. Warren (1983) does not provide enough information to calculate effect size.

Table 2.7

Meta-Analysis: The Effect of Intelligence on Self-Esteem

Study	*d*	95% CI	*r*	*p*
#Brunschwig I (1936)	-0.3019	-0.53 / -0.08	-.1500	.0081
#Brunschwig II (1936)	+0.5143	+0.31 / +0.72	+.2500	.0000
@Cowan (1981)	+0.4603	+0.25 / +0.67	+.2252	.0000
#Ferraro (1983)	+0.0791	-0.27 / +0.43	+.0400	.6578
%Marcus (1985)	+0.4262	+0.14 / +0.71	+.2100	.0032
&Sussman (1973)	+0.3016	+0.06 / +0.55	+.1500	.0157
Overall:	+0.2635	+0.16 / +0.36	+.1306	.0000

Notes.

1. *d*'s are positive for differences in the higher intelligence direction.
2. Intelligence was operationalized: IQ scores (#), reading/math scores (@; average d), GPA (%), or education in adulthood (&).
3. Garrison, Tesch & DeCaro (1978) report negative relationship between reading and self-esteem, but to not provide statistics. Larsen (1984) reports a relationship whose direction is unclear between academic achievement and self-esteem.

Deafness-related variables. Age at onset of deafness was related to esteem, d = .16, $p < .002$; specifically, becoming deaf at a later age was associated with higher self-esteem (Table 2.8). Degree of hearing loss, however, was not related to self-esteem, d = -.06 ($p < .19$; Table 2.9). Better oral communication ability was related to higher self-esteem, d = .41, $p < .001$, whereas signing ability was not, d = .02 ($p < .76$; Tables 2.10 and 2.11, resprctively).

Table 2.8

Meta-Analysis: The Effect of Age at Onset of Deafness on Self-Esteem

Study	*d*	95% CI	*r*	*p*
Brunschwig I (1936)	+0.1597	-0.06 / +0.38	+.0800	.1593
Brunschwig II (1936)	+0.4066	+0.20 / +0.61	+.2000	.0001
Cowan (1981)	+0.1598	-0.05 / +0.37	+.0800	.1358
McMahon (1985)	-0.0398	-0.28 / +0.20	-.0200	.7431
Ndurumo (1980)	+0.5537	+0.19 / +0.92	+.2700	.0025
Sussman (1973)	-0.1797	-0.42 / +0.06	-.0900	.1486
Overall:	+0.1560	+0.06 / +0.25	+.0777	.0015

Note.

d's are positive for differences in the direction of higher age at onset of deafness.

Table 2.9

Meta-Analysis: The Effect of Degree of Hearing Loss on Self-Esteem

Study	*d*	95% CI	*r*	*p*
Brunschwig I (1936)	+0.1397	-0.08 / +0.36	+.0700	.2183
Brunschwig II (1936)	-0.5143	-0.72 / -0.31	-.2500	.0000
Cowan (1981)	+0.2407	+0.03 / +0.45	+.1200	.0250
Larsen (1984)	+0.1856	-0.32 / +0.69	+.0934	.4418
McMahon (1985)	-0.4272	-0.67 / -0.19	-.2100	.0005
Ndurumo (1980)	+0.1187	-0.24 / +0.47	+.0600	.5097
Sussman (1973)	+0.1395	-0.10 / +0.38	+.0700	.2617
Overall:	-0.0624	-0.16 / +0.03	-.0312	.1930

Note.

d's are positive in the direction of greater hearing loss.

Table 2.10

Meta-Analysis: The Effect of Ability to Communicate Orally on Self-Esteem

Study	*d*	95% CI	*r*	*p*
McMahon (1985)	+0.2607	+0.02 / +0.50	+.1300	.0324
#Sussman (1973)	+0.5693	+0.32 / +0.82	+.2753	.0000
Overall:	+0.4091	+0.24 / +0.58	+.2004	.0000

Notes.

1. *d*'s are positive for differences in the direction of better ability for oral communication.
2. #: This *d* is the average of two effects: speech (r = .25), and lipreading (r = .30).

Table 2.11

Meta-Analysis: The Effect of Signing Ability on Self-Esteem

Study	*d*	95% CI	*r*	*p*
Ferraro (1983)	+0.1785	-0.17 / +0.53	+.0900	.3182
#McMahon (1985)	-0.1195	-0.36 / +0.12	-.0600	.3251
Sussman (1973)	+0.0995	-0.14 / +0.34	+.0500	.4230
Overall:	+0.0238	-0.13 / +0.18	+.0119	.7617

Notes.

1. *d*'s are positive for differences in the direction of better signing ability.
2. #: Several measures were reported; the d calculated here is based on the participant's frequency of using sign with his or her parents.

Age and gender. Age was reported in nine studies. There was a small but significant average effect size of age, $d = .09$, $p < .049$, such that older people (or children) had higher self-esteem (Table 2.12). Gender was analyzed in eight studies. The average effect, $d = .33$, $p < .001$, shows that deaf females tended to have higher self-esteem than deaf males (Table 2.13).

Table 2.12
Meta-Analysis: The Effect of Age on Self-Esteem

Study	*d*	95% CI	*r*	*p*
Brunschwig I (1936)	-0.3433	-0.57 / -0.12	-.1700	.0026
Brunschwig II (1936)	+0.5143	+0.31 / +0.72	+.2500	.0000
Cowan (1981)	-0.1598	-0.37 / +0.05	-.0800	.1358
Ferraro (1983)	+0.6439	+0.28 / +1.00	+.3100	.0004
Marcus (1985)	-0.0993	-0.38 / +0.18	-.0500	.4876
Ndurumo (1980)	+1.0229	+0.65 / +1.40	+.4600	.0000
Schlesinger & Meadow	-0.0365	-0.33 / +0.26	-.0183	.8013
Sussman (1973)	-0.1195	-0.36 / +0.12	-.0600	.3361
Warren (1983)	+0.1783	-0.19 / +0.54	+.0900	.3345
Overall:	+0.0874	0-0.00 / +0.18	+.0437	.0493

Note.
d's are positive for differences in the direction of older age.

Table 2.13

Meta-Analysis: The Effect of Gender on Self-Esteem

Study	*d*	95% CI	*r*	*p*
Brunschwig I (1936)	-0.1212	-0.44 / +0.20	-.0608	.4508
Brunschwig II (1936)	+0.4376	+0.33 / +0.54	+.2138	.0000
Green (1978)	+0.0724	-0.36 / +0.50	+.0365	.7385
Larsen (1984)	+0.4697	+0.07 / +0.87	+.2303	.0205
McMahon (1985)	+0.1154	-0.24 / +0.47	+.0579	.5244
Ndurumo (1980)	+1.4702	+0.56 / +2.38	+.6052	.0011
Schlesinger & Meadow	+0.2249	-0.06 / +0.51	+.1122	.1223
Sussman (1973)	+0.0010	-0.35 / +0.35	+.0005	.9955
Overall:	+0.3340	+0.25 / +0.42	+.1647	.0000

Notes.

1. *d*'s are positive for differences in the direction of females.
2. Four other studies reported gender as an independent variable, but did not provide enough information to either calculate effect size or to determine its direction, Blanton & Nunnaly (1964; M < F), Marcus (1985; M = F), Warren (1983; M = F), and Yachnik (1985; M = F).

Group identification. Two studies considered variables that may be conceptualized as measuring group identity: having primarily deaf friends, and preferring to be around deaf people. The combined effect of these two studies (d = .22, p < .35) failed to show a relationship with self-esteem (Table 2.14).

Table 2.14
Meta-Analysis: The Effect of Group Identification on Self-Esteem

Study	*d*	95% CI	*r*	*p*
Ndurumo (1980)	-0.0257	-0.81 / +0.76	-.0133	.9486
Weinberg & Steritt	+0.3611	-0.22 / +0.94	+.1806	.2193
Overall:	+0.2236	-0.24 / +0.69	+.1111	.3495

Notes.
1. *d*'s are positive for differences in the direction of deaf identification.
2. Group identification is operationalized as having mainly deaf or hearing friends (Ndurumo, 1980), or as wishing to associate mainly with deaf or hearing people (Weinberg & Steritt, 1986).

Summary. The meta-analysis suggests that overall, deaf people have lower self-esteem than hearing people, as would be predicted by the theories claiming that minority group members internalize the majority's negative attitudes. Level of self-esteem, however, was affected by a number of factors. Both ability to communicate orally and age at onset of deafness were related positively to self-esteem. This finding lends some support to Social Identity Theory: both ability to communicate orally and older age at onset of deafness can be seen as a stronger "hearing orientation", and suggest that the more similar a deaf person feels to hearing people, the higher is his or her self-esteem.

Other variables, however, paint a different picture. Deaf people who have deaf parents have higher self-esteem than children of hearing parents. Similarly, those participants whose hearing parents used sign language, and those who attended schools in which sign language was used had higher self-esteem than those who used primarily the oral mode of communication while growing up, both at home and in school. These

findings suggest that deaf people do not necessarily internalize hearing people's negative attitudes about them. Associating with deafness and sign language may, in fact, enhance one's self-esteem. These findings are in line with the prediction that higher group identification produces higher self-esteem (Crocker & Major, 1989; Tajfel, 1981).

Other findings do not support either Social Identity Theory or Crocker and Major's model. Deaf people who have attended deaf schools, who are more proficient in the use of sign language, and who identify with other deaf people do not have higher (or lower) self-esteem than those who attended hearing schools, who cannot use sign well, and who do not identify with other deaf people.

Overall, this review seems to support Tajfel's view that there are two roads leading to high self-esteem: one of dissociation from one's group, and one of identification with it. Crocker and Major's model is supported by the findings that use of sign language both at home and in school and having deaf parents are associated with self-esteem. The model could not adequately explain, however, why stronger association with hearing people would produce higher self-esteem. Alternatively, it may be hypothesized that both identification with hearing people (e.g., better oral ability) and identification with deaf (e.g., having deaf parents, using sign language) are related to self-esteem in the same individuals. Deaf people may choose selected aspects of hearing and deafness to enhance their self-esteem. In fact, one study of deaf adolescents found that "dual identification" was related to higher self-esteem more than singular deaf identification or hearing identification (Weinberg & Sterrit, 1986).

Although these findings are intriguing, many of the analyses reported above were based on a relatively small number of studies and should be interpreted with caution. In addition, many of the studies suffered from some methodological problems, particularly having to do with testing deaf respondents. Before concluding it is

necessary to consider some of these methodological issues.

Problems in assessment. Self-esteem among the deaf has been assessed in various ways. Four of the eleven studies that used written measures (Garrison, Tesch & DeCaro, 1978; Ndurumo, 1980; Sarfaty & Katz, 1978; Sussman, 1973) used the Tennessee Self-Concept Scale (Fitts, 1965), a self-administered, paper-and-pencil questionnaire. Other studies used a variety of written measures: the Self-Description Questionnaire III (Marsh & O'Neill, 1984, used by Yachnik, 1986); the Coopersmith Self-Esteem Inventory (Casey, 1981), a modified version of the Rogers Test of Personality Adjustment (Brunschwig, 1936, Study I); the Piers-Harris Children's Self Concept Scale, sometimes with adaptations (Cowan, 1981; Green, 1978; Wright, 1981); a semantic differential technique (Blanton & Nunnally, 1964; Cowan, 1981) and a specially designed 4-item scale (Weinberg & Steritt, 1986).

The advantage of using standardized tests is that their reliability and validity are established, and the results of one study may be compared to those of others. The disadvantage of using them with deaf individuals is that the measures were designed for use with a hearing population. The average reading level of deaf high school graduates is at the fourth- to fifth-grade (Bowe, 1989, 1991; Conrad, 1977). Most deaf people are therefore likely to misinterpret the test items, resulting in spuriously low scores (Garrison, Tesch, & DeCaro, 1978).

Some studies, especially those administered to young children, used measures that included pictures or illustrations. The Meadow Self-Image Inventory (SII), made of cartoon-like presentation with written words and illustrations of signs, was used in four studies (Ferraro, 1983; Gray, 1980; McMahon, 1985; Schlesinger & Meadow, 1972). Other measures included the Picture Game (Warren & Hasenstab, 1986), an illustrated sociometric test (Craig, 1965), a specially designed Personality Inventory

for Deaf Children (Brunschwig, 1936, study II), and the Primary Self-Concept Inventory (Larsen, 1984). In one study self-esteem was assessed by analyzing drawings made by deaf children (Barsky, 1987). Only one study used a measure that was translated into ASL (the Tennessee Self-Concept Scale; Marcus, 1985).

Many of the researchers who used pictures or illustrations indicated that these measures were chosen in order to enhance respondents' understanding of the task and to minimize verbal interaction between test administrator and deaf respondents. Other researchers assumed understanding of test items based on pilot testing (Yachnik, 1986), eliminating from data analyses those participants who were prejudged not to understand the test items (Sarfaty & Katz, 1978), or those who seemed to have trouble understanding the test items (Brunschwig, 1936, Studies I & II).

Even when test items consist of illustrations and are presumed to be relatively easy to understand by deaf respondents, some interaction is necessary between test administrator and research participants to explain the testing procedure and verify that respondents understand the test items. Most studies do not report how such interaction took place, whether it was conducted in English (orally or in writing) or in sign language.

These problems in assessment and the relatively small number of studies that measured any of the constructs reviewed, make it difficult to draw firm conclusions about what factors are associated with self-esteem in deaf individuals. It seems that the most robust findings are (a) that children of deaf parents have higher self-esteem than children of hearing parents; (b) that use of manual communication in the home and (c) intelligence are related to self-esteem; and (d) that deaf women have higher self-esteem than deaf men (although the reason for this is unclear). Other findings need further research. Specifically, comparisons between deaf and hearing participants need to be made with a larger variety of measures. Type of school and mode of

communication used in the school need to be studied further; current results show large discrepancies in effect sizes both in direction and magnitude among the various studies. The same erratic pattern is apparent in the findings on age at onset of deafness and degree of hearing loss. The association between age and self-esteem needs to be explored separately for children, adolescents and adults. Finally, more studies need to examine the relationship between self-esteem and communication skills, and between group identity and self-esteem.

CHAPTER II

ANTECEDENTS OF SELF-ESTEEM AMONG THE DEAF: A THEORETICAL MODEL

The model presented in Figure 1c suggests that four conditions must exist in order for the majority's negative attitudes to affect minority group members' self-esteem: (a) awareness of the majority's negative attitudes; (b) agreement with these attitudes; (c) the perception that these attitudes are held by significant others; and (d) agreement with the meaning of the label. People who are less aware of these negative attitudes, agree with them less, perceive those who hold those attitudes to be insignificant in their lives, and disagree with the negative connotations of the group's label will internalize society's negative attitudes toward their group to a much lesser degree than those who are aware of, agree with, and perceive these opinions and negative connotations as significant. Those in the first category will tend to have more positive attitudes toward their own group than those in the latter category.

Figure 3 presents a revision of this causal model as it pertains to deaf people, integrating factors believed to be critical in shaping deaf individuals' self-esteem. The degree of deafness in one's family and school are considered to be important factors in deaf people's lives. It can be assumed that deaf children who grow up in families and schools with high degree of deafness are exposed to the attitudes of the hearing world less than those children who grow up in families and schools in which all other people are hearing. Thus, children in the first category could be assumed to have lower awareness of and agreement with the majority's negative attitudes toward them. In adulthood, these people are hypothesized to have more positive attitudes toward deaf people. Less exposure to deafness during childhood, on the other hand, would result in higher awareness and agreement with the majority's negative attitudes. It is

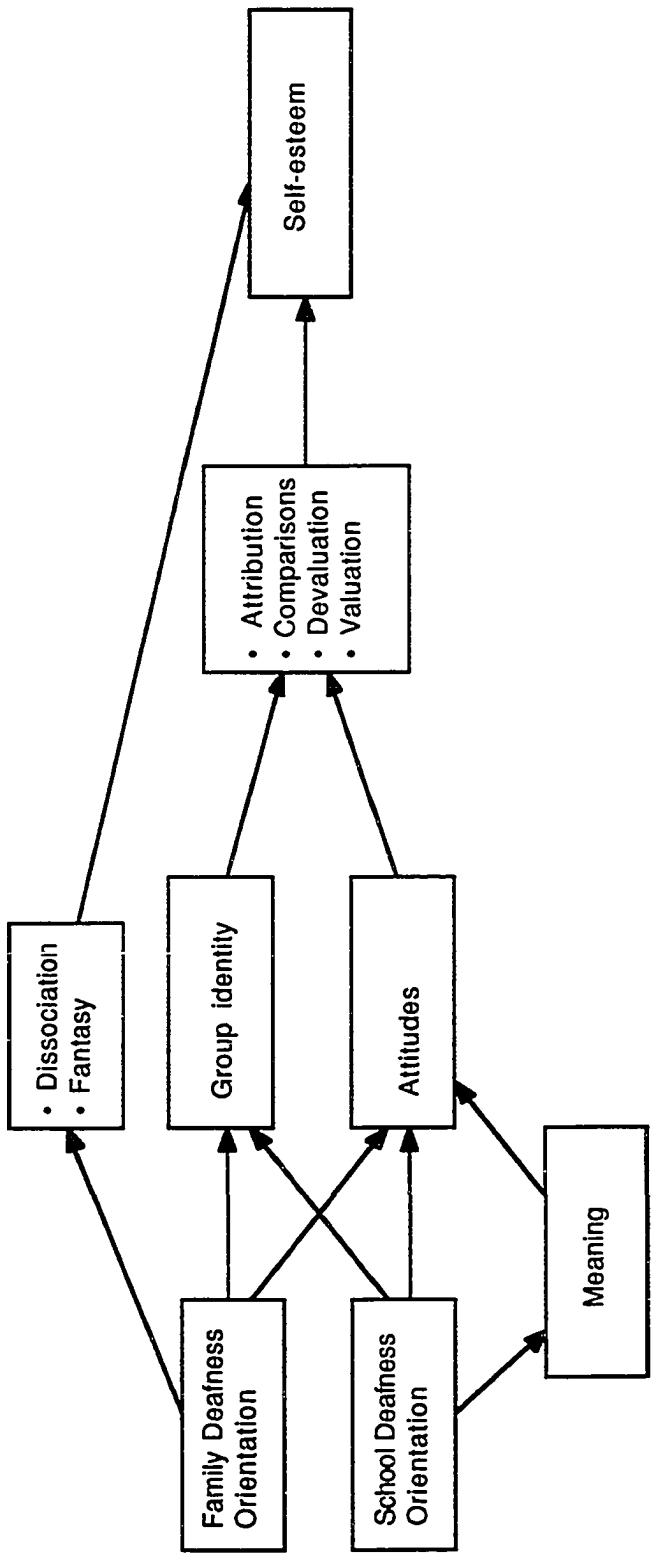


Figure 3. The Effect of Stigmatization on Self-Esteem among Deaf People

hypothesized that people who had less exposure to deaf people during childhood will have more negative attitudes toward the deaf when they become adults.

The degree of deafness orientation in the family and the schools will affect not only the attitudes a deaf person has toward the deaf community and other deaf people, but also whether the person chooses to identify with the deaf community in adulthood. Low levels of deafness orientation in childhood will result in weaker or no identification, whereas higher levels of deafness orientation will result in higher willingness to identify oneself as deaf. Supporting this hypothesis is the finding that strength of cultural background was related to strength of Hispanic identity among male Hispanic college students (r = .61; Ethier & Deaux, 1990).

For those people who identify with their group, Crocker and Major's model (1989) could be applied, predicting that the degree of identification with the deaf community and the attitudes the deaf person holds toward the deaf will determine whether he or she will use the aforementioned self-protective mechanisms: (a) attributing negative feedback to prejudice against the group, (b) ingroup comparisons, (c) selective devaluation of majority attributes, and (d) valuation of minority attributes. Deaf adults who hold more positive attitudes toward deafness and who identify with the deaf community will be more likely to use these psychological mechanisms. The level of use of these mechanisms will determine, in turn, one's level of self-esteem. It is hypothesized that deaf people who make more use of these mechanisms will have higher self-esteem than those who use these mechanisms less. This model, then, examines the effect of group identification on self-esteem in people who identify with their group.

Alternatively, based on Tajfel's SIT (1981), it is hypothesized that deaf people can achieve high self-esteem in different ways, and that those deaf people who identify

with their group will have comparable levels of self-esteem to those who do not.

Hypotheses

This study will test the following hypotheses, derived from Figure 3:

Ecological variables' effect on psychological variables.

1. Higher deafness orientation in one's (a) family and (b) school will be positively associated with higher self-esteem as adults.

2. The relationship between family/school deafness orientation and self-esteem will be mediated by (a) fantasy about being hearing, (b) the relevance of the label "deaf"; (c) group identity, and (d) attitudes toward deaf people.

Testing Crocker and Major's model

3. (a) Group identity and (b) attitudes toward deaf people will be positively associated with self-esteem.

4. These relationships will be mediated by (a) ingroup comparisons, (b) attribution of failure to prejudice against the group, (c) valuation of deaf attributes, and (d) devaluation of hearing attributes.

Testing Social Identity Theory (SIT) against Crocker and Major's model

5. SIT proposes two groups of respondents, both of whom should have comparable levels of self-esteem. People in the first group will identify strongly with their group; those in the second group will, instead, be aligned with the majority. According to Crocker and Major, people in the first group will have higher self-esteem than those in the second group.

Overview of studies

Two studies were conducted. In the first, 267 deaf adults completed a short questionnaire designed to a) obtain information from a large number of respondents to test the stated hypotheses, and b) screen the sample for the second study. Screening was based on current age, age at onset of deafness, and level of hearing loss. Forty seven respondents between the ages of 16 and 42 who were profoundly and prelingually[10] deaf and who were willing to participate further were interviewed in the second study.

With few exceptions the same variables were measured in both studies, although operationalization differed. The second study enabled a more reliable measurement of the constructs by using multiple items.

CHAPTER III

STUDY I

Method

Recruitment

An attempt was made to obtain a heterogeneous sample of deaf adults in education levels, socioeconomic status, and philosophy regarding manual or oral communication. Therefore, potential respondents were identified through various sources, including social and political groups organized by deaf people, service agencies organized by hearing people to serve deaf clients, organizations that advocate the use of sign language, and organizations that advocate the use of oral communication. A total of 646 questionnaires were distributed, of which 267 were returned, constituting an overall response rate of 41%[11]. A detailed description of organizations of recruitment and response rates is presented in Appendix B.

Sample

In all, 267 deaf adults (117 males, 150 females) participated in the study[12]. Participants ranged in age from 16 to 87, with a mean age of 42.9. The parents of 237 (88.8%) respondents were hearing, 28 (10.5%) respondents had deaf parents, and 2 (.7%) respondents had one hearing and one deaf parent[13]. In addition, 30 (12.7%) of the 237 participants with hearing parents had at least one deaf sibling.

One hundred and sixty six of the participants were born deaf, 48 became deaf at or before age three, and 30 respondents became deaf after the age of three. (Information was missing for 23 participants.)

Procedure

The researcher informed prospective respondents about the purpose of the study, either in sign language, when questionnaires were distributed in meetings or classes, or in a cover letter, when questionnaires were sent through the mail. As part of the questionnaire, all respondents were asked whether they would be willing to participate further in a longer, more detailed interview at a later date, at a time and place convenient to them. Monetary compensation in the amount of $20 was offered. Over half of the participants (178) volunteered to be interviewed later. Respondents who refused future contact were thanked for their help and were not contacted again.

Questionnaire

Respondents completed a two-page questionnaire, presented in Appendix C. The indices for family and school deafness orientation and for group identification, attitudes toward the deaf, self-esteem and psychological mechanisms were scored in the following way, based on the continua described in Figures 2a and 2b.

1) Family deafness orientation. Type of family was coded as 0 for hearing parents and siblings, 1 if one parent or at least one sibling was deaf, or 2 if both parents were deaf. Mode of communication used in the home was scored in a similar manner: 0 for oral communication, 1 for some use of sign language, and 2 for the use of sign language as the primary mode of communication. Scores on these two variables were summed such that the possible range of scores was 0 - 4, with higher scores indicating a higher deafness orientation in the home. The correlation between the two items is acceptably high to form an index ($r = .53$, $p < .001$)

2) School deafness orientation. Participants provided information about the types of schools they attended, the mode of communication used both in and out of

classes, and number of years they attended those schools. A score of 0 was assigned to a hearing school, 1 for a day deaf school, and 2 for a residential school. The use of oral communication in the class and with other children received a score of 0 (each), and use of sign language received a score of 1. Deafness orientation in each school was weighted by the number of years in attendance at that school. Scores were summed such that the possible range of scores was 0 - 4, with higher scores indicating a higher deafness orientation in the school.

3) Group identification. Percentage of deaf friends was trichotomized by a tertile split, 0 - 33%, 33% - 66%, or 66%-100%. Level of involvement with the deaf community was indicated on a 3-point scale, from 1 (not involved at all) to 3 (very involved). A composite group identity score was calculated averaging the scores on these two questions. The correlation between the two items is highly significant, $r = .71, p < .001$.

4) Attitudes toward deaf people. Three items (numbers 1, 3, and 7) from a revised version of the Attitudes Toward Disabled Persons scale form O (ATDP-O) were used (Yuker, Block, & Campbell, 1960; revised by Furnham & Lane, 1984). Higher scores indicate more positive attitudes. Cronbach's coefficient alpha was .47[14].

5) Self-esteem. Three items (numbers 6, 7 and 10) from the Rosenberg Self-Esteem Scale (Rosenberg, 1979) were used, with higher scores indicating higher self-esteem. In a previous study these items had an adequate internal reliability (alpha = .75 with an adult sample, and .72 with an adolescent sample; Hinrichsen, Revenson, & Shinn, 1985). In the current study the scale's reliability, using Cronbach alpha, was .63.

6) Use of psychological mechanisms. Items were designed to measure the four psychological mechanisms mediating between group identification and self-esteem. A

single item was used for each concept: (a) Ingroup comparisons: whether the respondents compared themselves educationally and economically to deaf or hearing people; (b) Attribution of failure: the perceived responsibility for the poorer outcomes of deaf people; (c) Valuation of deaf attributes: the importance of signing; and (d) Valuation of hearing attributes: the importance of clear speech.

In addition, gender, age, age at onset of deafness, and whether or not the respondent was able to hear speech with and without a hearing aid were assessed.

Results

The model in Figure 3 proposes relationships among family and school deafness orientation, group identification, attitudes toward deafness, the use of psychological mechanisms, and self-esteem. This model was tested using Pearson product moment correlations and regression analyses. In addition, in order to test the predictions from Social Identity Theory against those proposed by Crocker and Major's model, a cluster analysis was performed. This enabled identification of the different types of people discussed in SIT (those who identify strongly with their groups and those who dissociate from it). The relationship between the clusters and self-esteem was then examined.

Testing the relationship between ecological and psychological variables

Table 3 displays the zero-order correlations among the study's variables. Spearman rank-order correlations were also calculated and their values were compared to those of the Pearson correlations[15]. Both sets of correlations were very similar; it can therefore be concluded that the relationships among the variables in this study are linear.

Table 3.

Means and Zero-Order Correlations Among the Study's Variables (Study I)

	Family Deafness (FDO)	School Deafness (SDO)	Attitudes (ATD)	Group Identity (GI)	Self-Esteem (SE)	Ingroup Compar. (COM)	Import. of sign (SIGN)	Import. of speech (SPCH)	Respon-sibility (RESP)	Age (AGE)	Age at Onset (AGEON)	Gender (SEX)
SDO	.313***											
ATD	.025	-.118										
GI	.218***	.323***	.142*									
SE	.030	-.109	.340***	.177**								
COM	.204***	.407***	.048	.355***	-.174**							
SIGN	.152*	.044	.157*	.243***	.009	.187**						
SPCH	-.129*	-.344***	-.043	-.106	.041	-.303***	.001					
RESP	.082	.002	.108	.061	.006	-.118	.078	.014				
AGE	-.004	.081	-.192**	.161**	.049	-.038	-.054	.031	.119			
AGEON		-.151*	-.266***	-.082	-.289***	.076	.264***	-.028	.209***	.017	.108	
SEX	-.019	-.067	.003	-.088	-.032	.008	.154*	-.038	.008	-.087	-.085	
M	.79	1.65	2.94	2.38	3.18	1.83	3.40	3.23	2.13	42.87	1.82	.56
SD	1.23	1.36	.55	.75	.55	.61	.80	.87	.54	17.40	5.52	.50
Scale	0-4	0-4	1-4	1-4	1-3	1-4	1-4	1-3	1-6	16-87	0-48	0,1

Note. * $p < .05$; ** $p < .01$; *** $p < .001$; all two-tailed tests.

As predicted in Hypothesis 2, higher deafness orientation in the family and in school was positively related to group identity in adulthood ($r = .22$, $p < .001$, and $r = .32$, $p < .001$, respectively). Contrary to the predictions made in Hypotheses 1 and 2, however, family deafness orientation was unrelated to both attitudes toward deafness and to self-esteem. School deafness orientation was marginally related to attitudes, $r = -.12$, $p < .057$, and to self-esteem, $r = -.11$, $p < .081$, contrary to the hypothesized direction (Hypotheses 1 & 2). Surprisingly, higher school deafness orientation seems to have a negative association with both attitudes toward deafness and on self-esteem.

Family and school deafness orientations were significantly correlated, $r = .31$, $p < .001$, indicating perhaps that deaf parents were more likely to send their children to a deaf school than hearing parents.

Unlike the findings of the meta-analysis, demographic variables (age, age at onset of deafness, and gender) were not correlated with self-esteem. Age, however, was positively related to group identity, $r = .16$, $p < .01$, and negatively to attitudes toward deafness, $r = -.19$, $p < .002$, reflecting a historical trend. In the last two decades more deaf children have been mainstreamed and fewer have attended residential schools. Because school deafness orientation was positively related to group identity, the relationship between age and group identity probably reflects this trend. In addition, public attitudes toward deaf people and deafness have become more positive during the same period, indicated, in part, by the growing linguistic research on American Sign Language. This improvement in attitudes is reflected in the more positive attitudes younger deaf respondents had toward other deaf people.

It was hypothesized (Hypothesis 2) that attitudes toward deafness and group identification mediate the relationship between deafness orientation and self-esteem.

To test this hypothesis, the independent, dependent, and mediating variables should all be significantly related to each other. Pearson correlations (previously reported) revealed that family deafness orientation was unrelated to self-esteem; thus no mediation can occur between these two variables. Previous analyses also showed that school deafness orientation was only marginally related to both self-esteem and attitudes toward deaf people, therefore, no mediation could be tested with these variables.

In summary, although some of the relationships proposed in Hypothesis 2 were found among the study's variables, neither group identity nor attitudes toward deaf people mediated the relationship between family/school deafness orientation and self-esteem.

Although the hypothesized mediation effects were not supported by the data, it is possible that attitudes toward deaf people and group identity moderate the relationship between deafness orientation and self-esteem. A moderator is a "variable that affects the direction and/or strength of the relation between an independent or predictor variable and a dependent or criterion variable" (Baron & Kenny, 1986, p. 1174). Moderation effects are tested by an interaction of the independent and moderating variables. That is, the moderator affects the causal relation between independent and the dependent variables. The moderating effects of group identity and attitudes toward deaf people were tested separately on the relationship between deafness orientation and self-esteem.

To test the moderation effect of group identity (GI) on the relationship between school deafness orientation (SDO) and self-esteem, the interaction term of SDO x GI was entered in the second step of the analysis, after controlling for the effects of school deafness orientation and group identity on self-esteem in the first step. (Before

forming the multiplicative terms all independent variables were "centered", a linear transformation in which the mean value of each variable is subtracted from each individual's score. This transformation addresses the problem of multicollinearity between the independent variables and their interaction terms; Jaccard, Turrisi, & Wan, 1990). This interaction added significantly to the variance in self-esteem (see Table 4a). This interaction effect is depicted in Figure 4a[16]. When group identity was low, the relationship between school deafness orientation and self-esteem was highly negative. In the intermediate level of group identity this relationship was somewhat attenuated, although it was still negative. In the high level of group identity school deafness orientation and self-esteem were unrelated. Further examination of this interaction shows that group identity moderated the effect of school deafness orientation on self-esteem primarily in the higher levels of SDO such that the higher group identity, the higher self-esteem. In contrast, when school deafness orientation was low, group identity had little effect.

Table 4

Regression Analyses: Testing the Moderation Model (Effect of Ecolcgical Variables on Self-Esteem; Study I)

Analysis	Step	Predictor	Beta	R^2 change	R^2	*F*
	1	School Deafness (SDO)	-.18			
4a		Group Identity (GI)	.24	.06***	.06	8.12***
	2	SDO x GI	.23	.05***	.11	13.49***
	1	Family Deafness (FDO)	-.01			
4b		Group Identity	.18	.03*	.03	4.00*
	2	FDO x GI	.18	.03**	.06	5.18**

Note. * $p < .05$; ** $p < .01$; *** $p < .001$; n = 267.

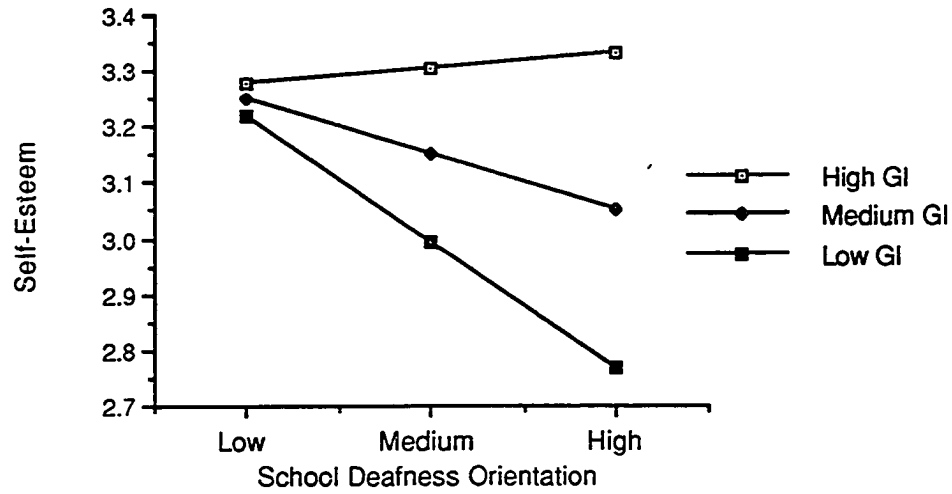


Figure 4a. Moderation analysis: School deafness orientation X group identity (GI) (Study I)

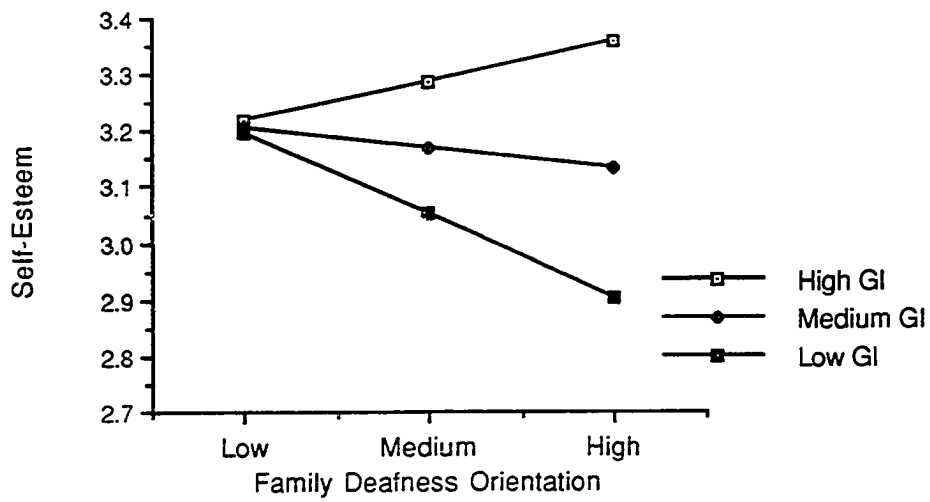


Figure 4b. Moderation analysis: Family deafness orientation X group Identity (GI) (Study I)

The same analysis was conducted with family deafness orientation as the independent measure. Group identity had a similar moderating effect on the relationship between family deafness orientation (FDO) and self-esteem (see Table 4b). As seen in Figure 4b, in the low level of group identity the relationship between family deafness orientation and self-esteem was highly negative. In the intermediate level of group identity this relationship was less negative. Finally, in the high level of group identity family deafness orientation and self-esteem were positively related. Once again, group identity moderated the effect of family deafness orientation on self-esteem primarily in the higher levels of FDO such that the higher group identity, the higher self-esteem. When family deafness orientation was low, group identity had little effect on the relationship between family deafness orientation and self-esteem.

Deafness orientation was conceptualized in these interactions as the independent variable, whereas group identity was the moderating variable. It is reasonable to assume that developmentally, the ecological variables of school and family deafness orientation precede the formation of group identity and other psychological variables. Therefore, they served as the independent measures while the psychological variables served as the moderating variables.

Attitudes toward deaf people did not moderate the relationship between either school or family deafness orientation and self-esteem. In both analyses, the interaction effect did not add a significant amount to the variance in self-esteem above and beyond the effects of deafness orientation and attitudes toward deaf people separately. It can be concluded that, unlike group identification, the relationships between school and family deafness orientation and self-esteem are not affected by the attitudes one currently holds toward other deaf people.

In conclusion, Hypotheses 1 and 2 were not supported: deafness orientation did

not have a direct or a mediated effect on self-esteem. Group identity, however, moderated the relationship between family/school deafness orientation and self-esteem, such that the lower level of group identity, the more negative was the relationship between deafness orientation and self-esteem. Higher group identity contributed positively to self-esteem primarily in the higher levels of deafness orientation.

Testing Crocker and Major's model

As predicted (Hypothesis 3), both group identification and positive attitudes toward deafness were positively related to self-esteem, $r = .18$, $p < .005$, and $r = .34$, $p < .001$, respectively. Attitudes and group identity had a low but significant correlation, $r = .14$, $p < .025$.

Of the four psychological mechanisms, only Comparisons was related to self-esteem, $r = -.17$, $p < .006$. The direction of this relationship was contrary to that predicted in Hypothesis 4, such that comparing oneself to deaf people was negatively associated with one's self-esteem. None of the other mechanisms proposed by Crocker and Major (1989) was related to self-esteem.

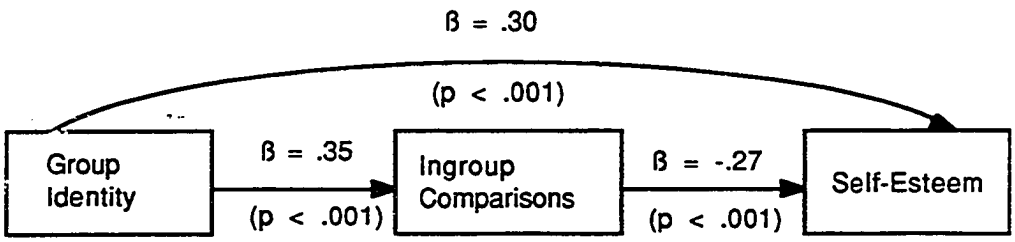
Some other correlations are worth examining. The importance of speech and importance of sign were not correlated, lending support to the idea that selective valuation of minority attributes is independent of the devaluation of majority attributes. A related finding is the correlation of group identification with the importance of sign, $r = .24$, $p < .001$, but not with importance of speech, $r = -.11$, supporting both the construct validity of group identification and the separate processes of minority valuation and majority devaluation.

It was hypothesized (Hypothesis 4) that the mechanisms of ingroup comparisons, importance of signing, importance of speech, and attribution of responsibility mediate

between attitudes toward deaf people/group identity and self-esteem. To test mediation, a series of regression analyses, termed reduced form equations, (Cohen & Cohen, 1983, pp. 353-378) was used to determine whether the correlations among the constructs in the study could be decomposed in a manner consistent with the model presented in Figure 3. Reduced form equations analysis is a modeling procedure that allows for a detailed partitioning of variance within a set of variables that are assumed to be causally related. This technique enters each variable in the order of specified causal priority. The total effect of a variable on another variable is composed of its direct and indirect effects. A direct effect is assessed when all other measured causes of the dependent variables are included in the equation. An indirect effect is estimated by the products of the direct effects.

Because only one of the four psychological mechanisms--Comparisons--was related to self-esteem, only this variable was tested for mediation. In addition, Comparisons was related to group identity, but not to attitudes. Therefore, only its applicability as a mediator between group identity and self-esteem was examined.

The direct and indirect effects of group identity on self-esteem were assessed. To conclude that mediation occurs, the direct link between group identity and self-esteem should be close to zero; any variance shared by these two constructs should be mediated by the ingroup comparisons. Figure 5 shows that group identity had a direct effect on self-esteem, ß = .30 ($p < .001$), and on Comparisons (ß = .35, $p < .001$). Comparisons had a direct effect on self-esteem, ß = -.27 ($p < .001$). The indirect effect of group identity on self-esteem was thus .35 X -.27 = -.09. Because the direct effect of group identity was not close to zero, it must be concluded that Comparisons, contrary to prediction (Hypothesis 4), did not mediate the relationship between group identity and self-esteem.



Indirect effect = .35 * -.27 = -.09

Total effect = .30 + (-.09) = .21

Figure 5. The mediation effect of ingroup comparisons on the relationship between group Identity and self-esteem. (Study I)

To summarize, both attitudes toward deaf people and group identity were related to self-esteem, supporting Hypothesis 3. None of the hypothesized mediation effects, however, was evident, failing to support Hypothesis 4. Specifically, the four psychological mechanisms suggested by Crocker and Major (1989) did not mediate the relationship between group identity and self-esteem.

It is possible that these mechanisms had a moderating effect on the relationship between group identity or attitudes toward deaf people and self-esteem. Moderation analyses were conducted to test this possibility.

Ingroup comparisons moderated the relationship between group identity and self-esteem (see Table 5a). The higher the level of ingroup comparisons, the stronger was the positive relationship between group identity and self-esteem (Figure 6a). In the lower levels of ingroup comparisons the relationship between group identity and self-esteem was close to zero. This moderating effect was stronger in the lower levels of group identity.

Table 5.

Regression Analyses: Testing the Moderation Model (Effect of Psychological Variables on Self-Esteem; Study I)

Analysis	Step	Predictor	Beta	R^2 change	R^2	*F*
	1	Group Identity (GI)	.30			
5a		Ingroup Comparisons (COM)	-.27	.11***	.11	14.11***
	2	GI x COM	.23	.05***	.15	12.59***
	1	Group Identity (GI)	.19			
5b		Importance of Speech (SPCH)	.06	.04**	.04	4.72**
	2	GI x SPCH	-.17	.03**	.07	7.53**
	1	Attitudes toward Deaf (ATD)	.34			
5c		Importance of Speech (SPCH)	.05	.12***	.12	16.72***
	2	ATD x SPCH	-.13	.01*	.13	4.39*

Note. * $p < .05$; ** $p < .01$; *** $p < .001$; n = 267.

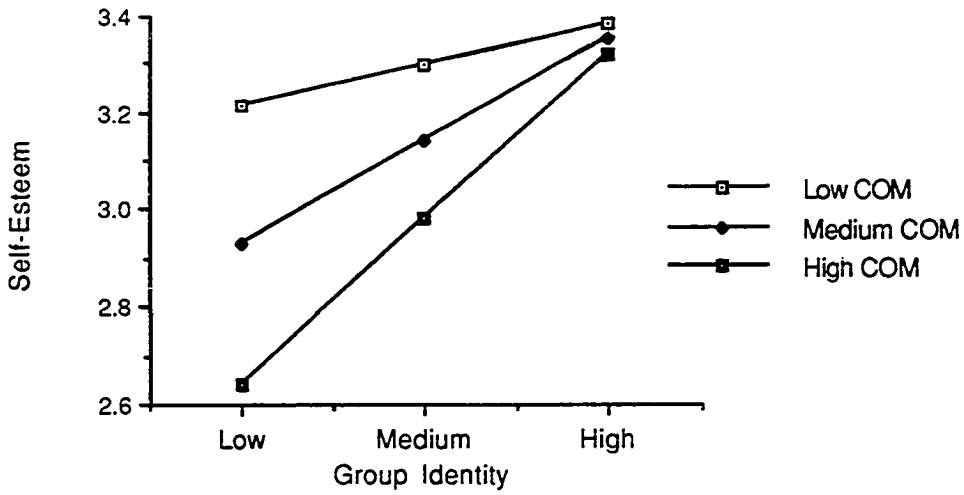


Figure 6a. Moderation analysis: Group identity X ingroup comparisons (COM); (Study I)

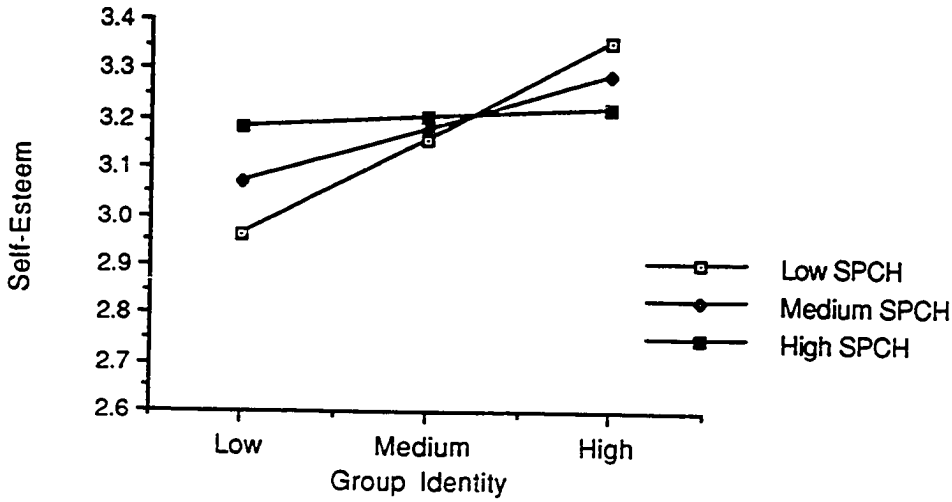


Figure 6b. Moderation analysis: Group identity X importance of speech (SPCH); Study I

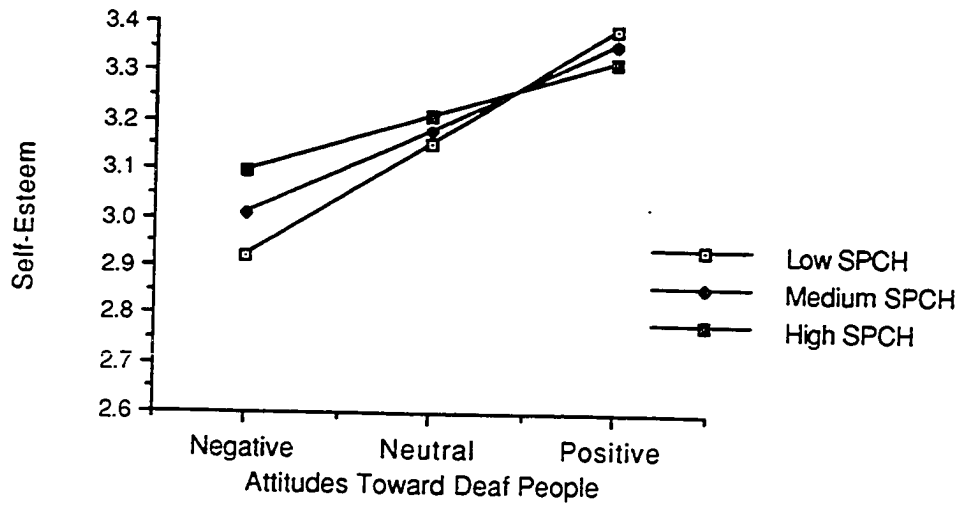


Figure 6c. Moderation analysis: Attitudes toward deaf people X Importance of speech (SPCH); (Study I)

The relationship between group identity and self-esteem was also moderated by the importance of speech (see Table 5b). As Figure 6b shows, speech moderated the effect of group identity on self-esteem such that the lower the importance accorded to

clear speech, the more positive was the relationship between group identity and self-esteem. That is, for those people for whom clear speech was relatively unimportant, there was a strong positive relationship between group identity and self-esteem. For those people who regarded clear speech as important, however, the relationship between group identity and self-esteem was close to zero.

Finally, the importance of speech had a similar but smaller moderating effect on the relationship between attitudes toward deaf people and self-esteem (see Table 5c). As shown in Figure 6c, speech moderated the effect of attitudes on self-esteem such that in the lower levels of SPCH the positive relationship between attitudes toward deaf people and self-esteem was stronger. This relationship became weaker for those respondents who regarded clear speech as more important.

Group identity and attitudes were conceptualized in these analyses as the independent variables, whereas ingroup comparisons and the importance of speech were the moderating variables. Based only on the statistical analyses it could be argued that ingroup comparisons, for example, should serve as the independent variable and group identity as the moderating variables. The formulation used in the study, however, follows the theoretical reasoning suggested by Crocker and Major's model, that those minority members with stronger group identification will be more likely to employ various psychological mechanisms in order to protect their self-esteem.

In summary, three moderation effects were evident: (a) ingroup comparisons moderated the relationship between group identity and self-esteem, (b) the importance of speech moderated the relationship between group identity and self-esteem, and (c) the importance of speech moderated the relationship between attitudes toward deaf people and self-esteem. Although Crocker and Major hypothesized a mediation and not a moderation effect, these three effects were in the direction implied by their model.

Higher levels of ingroup comparisons and lower importance of speech strengthened the positive relationship between group identity and self-esteem (even though ingroup comparisons by itself was negatively related to self-esteem). The importance of speech had a similar effect on the relationship between attitudes and self-esteem.

Testing Social Identity Theory against Crocker and Major's model

The moderation analyses, while significant, accounted for a rather small amount of variance in self-esteem (changes in R^2's ranged from .06 to .13). It is possible that, as Tajfel (1981) suggested, different people take different paths to enhance their self-esteem. An analysis that would identify these different types of people may be appropriate to test Tajfel's notion. Cluster analysis is such a strategy because it classifies entities (in this case, people) who are similar to each other into groups. These groups can be then compared on various criterion variables (here, self-esteem).

Cluster analysis was performed on the following seven variables: family deafness orientation (FDO), school deafness orientation (SDO), attitudes toward deafness (ATD), group identity (GI), ingroup comparisons (COM), importance of signing (SIGN), and importance of speech (SPCH). Ward's method (1963), a hierarchical cluster algorithm, was applied to the squared Euclidian distance between participants' standardized scores (using SPSSX). This method is designed to optimize the minimum variance within clusters by joining cases resulting in the minimum increase in the error sum of squares (Aldenderfer & Blashfield, 1984).

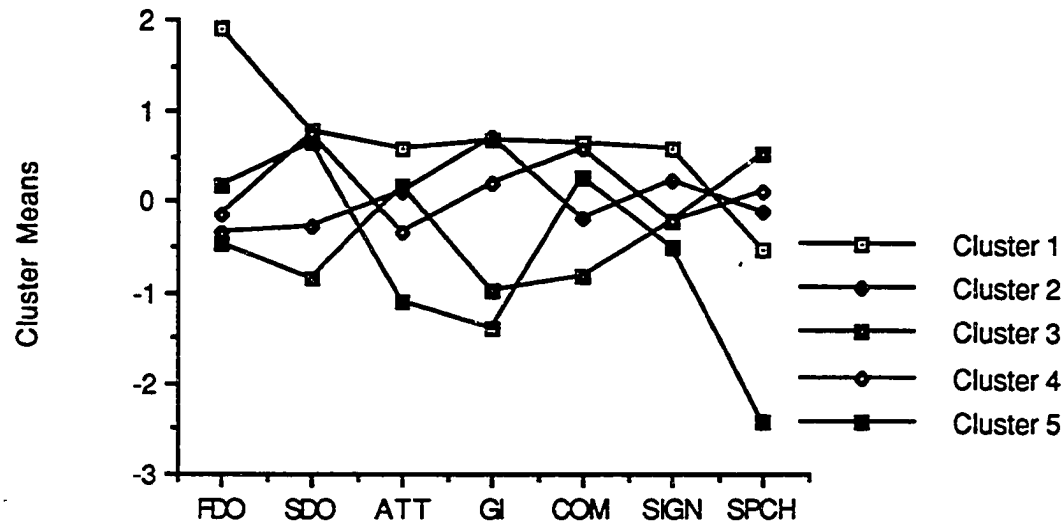
A five-cluster solution was selected, as it seems to provide the most information without redundancy (see Table 6). Because each variables was measured on a different scale, standard scores rather than raw scores are reported for each cluster on criterion variables. Univariate tests of cluster differences on the seven variables used in determining the clusters were highly significant. Figure 7 portrays the profiles of the five clusters. (See portrayal of individual clusters in Appendix D).

Table 6

Standard Scores of Cluster Variables and Analysis of Variance across Clusters (Study I)

	Cluster						
	1 n = 32	2 n = 57	3 n = 59	4 n = 73	5 n = 9	*F*	Scheffe post-hoc comparisons
Family Deafness Orientation							
M	1.892	-.331	-.479	-.155	.167	81.94***	1 > 2, 3, 4, 5
SD	.792	.589	.392	.725	.994		
School Deafness Orientation							
M	.780	-.290	-.856	.750	.662	55.37***	1, 2, 4, 5 > 3;
SD	.802	.700	.606	.743	.732		1, 4,5 > 2
Attitudes Toward Deaf People							
M	.581	.124	.185	-.328	-1.105	8.93***	1, 2, 3, > 5;
SD	.971	1.016	.888	.976	.678		1 > 4
Group Identity							
M	.675	.715	-.978	.220	-1.390	69.81***	1, 2, 4, > 3,5;
SD	.403	.301	.817	.790	.663		1, 2 > 4
Ingroup Comparisons							
M	.642	-.176	-.826	.598	.284	32.26***	1, 2, 4, 5 > 3;
SD	.905	.916	.772	.704	.000		1, 4 > 2
Importance of Sign							
M	.601	.252	-.219	-.221	-.495	6.66***	1 > 3, 4
SD	.421	.705	1.188	.985	1.401		
Importance of Speech							
M	-.517	-.125	.531	.095	-2.434	30.79***	1, 2, 3, 4 > 5;
SD	1.156	.870	.612	.738	.383		3, 4 > 1;3 > 2

Note. df = 5, 224. *** $p < .001$



Legend:
FDO: Family Deafness Orientation
SDO: School Deafness Orientation
ATT: Attitudes toward the Deaf
GI: Group Identity
COM: Ingroup Comparisons
SIGN: Importance of Sign
SPCH: Importance of Speech

Figure 7. Five clusters (Study I)

Description of Clusters

Cluster 1: Deaf Power (n = 32). These people grew up in deaf homes, went to deaf schools, have positive attitudes toward deafness, and feel that they are a part of the deaf community, compare themselves to other deaf people, feel that signing is important and that speech is not. Cluster 2: Hearing Background/Current Deaf (n = 57). People in this cluster came from hearing homes and schools, but probably discovered the deaf community later in life. They have mildly positive attitudes toward deafness, they feel very much that they are a part of the deaf community, and while they do not compare themselves to other deaf people (probably because of their hearing background), they feel that signing is somewhat important and that speech is not. Cluster 3: Hearing Deaf

People[17] (n = 59). Respondents in this cluster came from hearing families and went to hearing schools. They hold mildly positive attitudes toward deafness, but they do not feel that they are a part of the deaf community. They do not compare themselves to other deaf people, and they feel that signing is unimportant and that speech is very important. Cluster 4: Deaf Background, Average (n = 73). People belonging to this cluster came from hearing homes but went to deaf schools. Their attitudes toward deafness are mildly negative, their sense of community and their attitudes toward signing and speech are rather average. At the same time they compare themselves to other deaf (rather than to hearing) people. Cluster 5: Negatives (n = 9[18]). These people had a low degree of deafness orientation in the home and had attended deaf schools. They compare themselves somewhat to other deaf people (probably because of having gone to deaf schools) but their attitudes toward deaf people are very negative. They do not feel at all a part of the deaf community, and they believe that both signing and clear speech are unimportant.

These cluster profiles were unrelated to gender, age, age at onset of deafness, and the ability to hear speech without hearing aids. A one-way analysis of variance showed that the clusters differed in the ability to hear speech with a hearing aid, $F(4,221) = 2.98$, $p < .02$. A post-hoc Scheffe test shows that cluster 3 ("Hearing Deaf People") had the highest scores on this variable ($M = .68$, compared to the combined mean of all other groups[19], $M = .44$), indicating perhaps the use of more powerful hearing aids, in line with their general hearing orientation.

The cluster analysis identified five distinct profiles of deaf people. Is there evidence that these profiles are associated with differences in self-esteem? According to Social Identity Theory, minority group members may enhance their self-esteem either by associating with their group and working toward social change or by

dissociating from their group and aligning themselves with the majority. Based on this theory it is predicted that both the "Deaf Power" and the "Hearing Deaf People" clusters would have equally high self-esteem (Hypothesis 5; no prediction is implied in the theory regarding the other clusters). According to Crocker and Major's (1989) formulation, however, those minority group members who identify strongly with their group would have higher self-esteem than those who do not. Consequently, their model would predict that the "Deaf Power" and the "Hearing Background; Current Deaf" clusters (Clusters 1 and 2, who both have high current group identification) would have higher self-esteem than the "Hearing Deaf People" (cluster 3 with no group identification).

A one way analysis of variance was performed to test the effect of cluster membership on self-esteem. This analysis was highly significant, F (4,227) = 7.89, $p < .001$. A post-hoc Scheffe test indicated that Clusters 1, 2, and 3 had significantly higher self-esteem than Cluster 5, and that Clusters 1 and 2 had significantly higher self-esteem than Cluster 4.

The "Deaf Power" Cluster had the highest self-esteem (M = 3.41), followed by the "Hearing Background; Current Deaf" cluster (M = 3.32), followed by the "Hearing Deaf People" cluster (M = 3.27), although these differences were not statistically significant. These results support Social Identity theory more than Crocker and Major's model. The hypothesized difference between the "Deaf Power" cluster and the "Hearing Deaf People" cluster suggested by their model did not emerge. As Social Identity Theory posits, different minority group members choose different paths to enhance their self-esteem. These paths may have different consequences for other psychological processes and behaviors, but not for self-esteem. In other words, identifying with one's group or dissociating from it contribute equally to self-esteem.

Cluster 5 people had the lowest self-esteem scores (M = 2.59). Given the general negativity of this cluster (negative attitudes toward deaf people, sign language and speech, and extremely low group identification), it is not surprising that their self-esteem was the lowest, significantly lower than Clusters 1, 2 and 3.

Summary

Contrary to the hypotheses (1 & 2), the ecological variables of family and school deafness orientation were not directly related to self-esteem. Group identity, however, moderated the relationship between deafness orientation and self-esteem such that the higher the levels of group identity, the more positive was the relationship between deafness orientation and self-esteem.

Crocker and Major's model was mostly unsupported. Although both group identity and attitudes toward deaf people were related to self-esteem (Hypothesis 3), none of the four psychological mechanisms suggested by the model mediated these relationships (Hypothesis 4). Instead of the proposed mediation effect, two of the variables (ingroup comparisons and the importance of speech) had a moderating effect on the relationship between group identity and self-esteem in the direction implied by the model.

Finally, the finding that both "Deaf Power" individuals and "Hearing Deaf People" had similar levels of self-esteem provided support for Social Identity theory but not for Crocker and Major's model.

CHAPTER IV

STUDY II

This study served several purposes beyond those of Study I. First, it enabled a more reliable measurement of the constructs, as well as the measurement of additional constructs to those in the first study. It also provided respondents with the opportunity to participate using the mode of communication of their choice, an opportunity that is lacking in most research studies with deaf individuals. Finally, it provided qualitative information that could not be obtained in a questionnaire study. Such qualitative information, in addition to highlighting the quantitative data, enables generation of hypotheses for future research.

Because one of the study's goals was to assess the impact of the educational and family background on group identification and self-esteem, younger (under 45) rather than older adults were selected. Studying this age group should minimize the effect of events occurring later in life that could mask the effect of educational and family background, such as later association with the deaf community and studying of sign language. Other eligibility criteria were prelingual deafness (being born deaf or becoming deaf before age 3), and inability to hear speech without a hearing aid.

Method

Selection

Eighty-six of the 267 people who completed the questionnaire both met the eligibility criteria and volunteered to be interviewed[20]; attempts were made to contact 80 participants[21]. Fifty six of them (70%) were scheduled for an interview. Nine of

the 56 interviews conducted were judged to yield poor information regarding the variables studied here[22] and were not used in analyses, yielding a sample of 47 individuals.

Sample

Forty-seven people (20 men, 27 women) participated in this study. Thirty six were White, 5 were Black, 3 were Hispanic, and 4 were other minorities (i.e., one participant from India and the others were mixed [White and Black or Latino and Black]). Participants ranged in age from 16 to 42, with a mean age of 28.3. The parents of 39 (83%) participants were hearing; 7 (14.9%) had deaf parents, and one participant had one deaf parent. In addition, 7 (17.9%) participants with hearing parents had at least one deaf sibling.

Procedure

When people were contacted to schedule an interview they were asked whether they would prefer to communicate with the (hearing) interviewer orally (in English), in sign, or in some other mode of communication. Fifteen of the interviews were conducted in ASL, 11 in oral English[23] and 21 using a combination of both sign and speech. A sign language interpreter[24] assisted in conducting 18 of the interviews, and no interpreter was present in the other 29 interviews[25].

Interviews were conducted at a time and place convenient to participants. Twenty-eight interviews were conducted at the researcher's office, 14 in the participant's home, 4 in the respondent's work-place and 1 in another place.

At the beginning of the interview the researcher explained the purpose of the study and the type of questions that would be asked. Participants were also told that the

interview would last approximately two hours, that it would be tape recorded, and that their responses would be confidential. They were then asked to sign an informed consent form (see Appendix E). At the end of the interview session, participants were given an opportunity to add information that they felt was not covered in the interview, and to ask the interviewer questions. Finally, they were thanked and paid $20 for their participation.

Measures

The literature review on self-esteem in the deaf indicated that much of the research previously conducted with deaf respondents suffered from severe measurement limitations. The present study attempted to address this issue by using testing procedures that are reliable, valid, and appropriate to deaf respondents, i.e., administering the questionnaire in the mode of communication preferred by the respondents.

Interviews consisted of four parts: 1) a semi-structured questionnaire constructed by the author; 2) a modified version of the Collective Self-Esteem Scale (Luhtanen & Crocker, in press); 3) a modified version of the Attitude Toward Disabled Persons (ATDP-O) (Yuker, Block, & Campbell, 1960); and 4) a short version of the Tennessee Self-Concept Scale (Fitts, 1965).

Semi-structured questionnaire. Questions were adapted from a number of sources: a national survey of deaf adults (Schein & Delk, 1974), a survey of people with disabilities (Harris, 1986), and research on gender identity conducted with women (Gurin & Markus, 1989; Gurin & Townsend, 1986). Other questions were formulated based on the theoretical approaches guiding the study.

Scoring and data reduction

The interview yielded primarily open-ended data about the following constructs: group identity, valuation of deaf and hearing attributes, fantasy about becoming hearing, and relevance of the label "deaf"[26]. In addition to the psychological variables, several ecological variables were included in the interview: family and school deafness orientation, socioeconomic status, level of hearing, and skills in various modes of communication. Each construct was assessed by multiple items; these were later combined into corresponding indices. Because items were scored on different scales, scales or subscales were created by calculating the mean of the items' standardized scores. (A scoring key is provided in Appendix F.)

Details about family and school environments were elicited in a "life-history" format; participants were encouraged to describe their childhood without much questioning. If and when they failed to address any of the factors of interest for this study, probes were used.

All interviews were transcribed. A coding scheme was developed to assess the variables described above, and all interviews were coded by two coders after a training period. Inter-rater reliability was calculated as percent agreement. The average inter-rater reliability over 46[27] interviews was 88.7%, ranging from 74.5% to 95.0%. After individually coding the interviews, all coding was discussed between the coders and the researcher to resolve disagreements.

Family deafness orientation. The following variables were combined into a scale: 1) Hearing status of parents; 2) mode of communication used in the home by members of the family not including the respondent[28]; 3) modes of communication used with the respondent (mean score of three modes); 4) number of deaf siblings; 5) number of hard of hearing siblings; and 6) number of hearing siblings. The scale was created by

calculating the mean of the standardized score of the 6 variables. Internal reliability of this scale, indicated by Cronbach coefficient alpha, was .86.

School deafness orientation. Each school the respondent attended received a score based on its deafness orientation (see Figure 2b), weighted by the length of time the school was attended. The average score of two communication methods in the classroom was calculated, as well as that for communication outside of class. These three items (deafness orientation of schools, mode of communication in class, and mode of communication outside of class) were combined into a scale whose internal reliability alpha was .86.

Group identity. Items were first combined conceptually into six domains (deafness orientation of work, deafness orientation of children, educational recommendations, general identity, social identity, and political identity); these subscales were later combined into an overall group identity scale. Items regarding either actual behavior or behavioral intentions were included in a single scale, as they both indicate preference for affiliation with other deaf people. The six subscales of group identity are presented next.

Deafness orientation of work. Three items were combined into one subscale: 1) deafness orientation of the workplace (or school, when appropriate), 2) modes of communication used at work (mean scores across three modes), and 3) how often the person spent time at work with other deaf people. This work subscale had a Cronbach coefficient alpha of .95.

Deafness orientation of children. Two items were combined into this subscale: 1) preference for having a deaf or a hearing child (respondents who already had children were asked about their preference prior to having had children), and 2) mode of communication used or imagined being used with hearing children. The correlation between these two items was .43 ($p < .01$).

Educational recommendations. Participants were asked to make recommendations about how to educate deaf children: 1) in what type of setting, 2) using what mode of communication, and 3) whether deaf or hearing teachers are preferable. This scale had a reliability coefficient alpha of .91.

General identity. Two items constituted this subscale: 1) feeling of overall identification and similarity with other deaf people, and 2) preferred mode of communication. The two items correlated .38 ($p < .01$).

Social identity. Seven variables were combined into one subscale: 1) percent of deaf friends, 2) frequency of spending leisure time with deaf friends, 3) preferred hearing status for a spouse/lover, 4) mode of communication used with current or most recent spouse/lover, 5) mode of communication used with deaf friends, 6) mode of communication used with hearing friends, and 7) number of deaf social organizations or activities the person attended (e.g., deaf theater, recreation organizations). The internal reliability of this scale, indicated by Cronbach's coefficient alpha, was .85.

Political identity. This subscale consisted of four items: 1) number of deaf political organizations of which the respondent was a member (e.g., National Association of the Deaf), 2) desire to join a hypothetical "deaf nation", 3) number of deaf publications to which the respondent subscribed, and 4) level of agreement with the Gallaudet protest[29]. The combined scale had a reliability coefficient of .75.

These six subscales (work, children, educational recommendations, general identity, social identity, and political identity) were combined into a single group identity scale with reliability coefficient of .87. Construct validation was provided by the collective self-esteem scale (Luhtanen & Crocker, in press; $r = .45$, $p < .002$).

Valuation. To measure the valuation of deaf and hearing attributes (constructs suggested by Crocker & Major, 1989), a table was constructed that included various

attributes associated with deafness (e.g., having better visual sense) and with hearing (e.g., ability to use the phone). For each attribute a decision was made by the coders whether the respondent had the attribute (or was able to carry out the activity), and thought it was important. Based on this table several subscales were created. Subscales were created by counting the following: 1) **Frustration by the inability to hear:** those hearing-related attributes that the person indicated were important but he or she did not possess (or could not do); 2) **Hearing pride:** having attributes or being able to do activities that are hearing-related and were considered important by the respondent; 3) **Deaf pride:** having attributes or being able to do activities that are deaf-related and were considered important to the respondent; and 4) **Devaluing hearing attributes:** those attributes that are hearing-related but were considered unimportant. In addition, the number of deaf-related technological devices (e.g., TTY, close-caption decoder) mentioned by the respondent were counted (range 0 - 6), as was the number of hearing aids used (range 0 - 2).

A principal components analysis with oblique rotation was conducted on the six items. It yielded two factors of three variables each. The first factor, Valuation of Hearing attributes, accounted for 38% of the variance and was composed of hearing pride, number of hearing aids, and devaluation of hearing attributes (negatively loaded). The combined scale had a reliability coefficient of .81. The second factor, Valuation of Deaf attributes, accounted for 24% of the variance and was composed of deaf pride, deaf technology, and frustration by the inability to hear (loaded negatively). This combined scale had low reliability, alpha = .39. Despite the low reliability this scale was used in subsequent analyses because of its theoretical importance for Crocker and Major's model (1989). The two factors were unrelated (r = -.06).

Fantasy. Fantasizing about becoming hearing was hypothesized to mediate

between deafness orientation and self-esteem. This construct was measured by four items: 1) whether or not the respondent wished he or she were hearing, 2) whether or not the person would consider becoming hearing if a "cure" became available, 3) willingness to pay money for such a procedure, and 4) the dollar amount the person would pay (range 0 - $100,000; the mean amount was $10,000). These four items were combined into a scale with reliability of .81.

Relevance of the label "deaf". Based on self-description participants were scored as "hearing impaired", "hard of hearing", or "deaf". In addition, the number of times "deaf" and "hearing impaired" was used by the respondent during the interview to describe himself or herself was counted. In order to control for interview length, the proportion that each term was mentioned was used rather than the raw count. These three items (the preferred term, the proportion of "deaf" mentioned, and the proportion of "hearing impaired" mentioned [negatively scored]) were combined into a scale with reliability of .82.

Skills. Respondents were asked to indicate their proficiency on a 7-point scale (from non-existent to excellent) in the following eight areas: 1) signing, 2) receptive sign, 3) fingerspelling, 4) receptive fingerspelling, 5) ASL, 6) speech, 7) lip-reading, and 8) English. A principal components analysis with oblique rotation yielded two factors, Sign Ability (accounting for 53% of the variance) and Oral Ability (accounting for additional 16% of the variance). The first factor included expressive and receptive skills in sign, fingerspelling, and ASL. The second factor included speech, lip-reading and English skills. The combined sign ability scale had a reliability of .92; the combined oral ability scale, had alpha of .47. Higher scores indicate better abilities in either domain.

Hearing. Participants indicated how well they could hear various sounds of

decreasing amplitude (a) with a hearing aid and (b) without one (see Appendix F for questions and scoring). These questions compose a Guttman-like scale, whereby an answer to a higher-order question (e.g., inability to hear sound of high amplitude) dictates an answer to a lower-order question (e.g., inability to hear sound of a lower amplitude). Two scores were computed, one for ability to hear with a hearing aid, and one without a hearing aid. Higher scores indicate better hearing ability.

Socioeconomic status of respondents' parents and respondents themselves were calculated based on their education and occupation, using Hollingshead's (1975) formula (see Appendix F). Level of education and occupation are assigned prestige scores, are weighted and then summed. For parents, the ranges of scores was 21 - 66, with a mean of 44.8; for participants range and mean were 17 - 66, and 42.4, respectively[30].

Standardized Scales

The Tennessee Self-Concept Scale (TSCS; Fitts, 1965). This scale measures five aspects of personal self-esteem: moral, personal, physical, family, and social. Each subscale consists of 18 items, half worded in a positive direction and half worded in a negative direction. Ten items from the MMPI's lie scale make up an additional self-criticism scale. Answers are indicated on a 5-point scale from 1 ("Strongly disagree") to 5 ("Strongly agree). The TSCS is one of the most widely used self-concept instruments; it was ranked first among self-concept instruments in the 1985 *Mental Measurements Yearbook* (Mitchell, 1985, p. xviii), and 1,350 references are contained in the TSCS bibliography (Reed, Fitts, & Boehm, 1981) covering the 1965-1980 period.

In a recent review of the scale, Marsh and Richards (1988) concluded that two of the five scales, moral and personal, were not supported by exploratory and

confirmatory factor analyses. Accordingly, the morel and personal subscales were not used in the current study. The remaining items are listed in Appendix G.

The TSCS was translated into American Sign Language by researchers at the Gallaudet Research Institute and was made available for this study on a video cassette. The written English version of the complete scale is correlated .79 with the ASL version (Marcus, 1985). Respondents elected to answer either the video-tape ASL version or a written/English version. Nineteen participants viewed the ASL version of the TSCS, 25 read it in English, and in the 3 cases where respondents were not proficient enough in English or ASL, the scale was signed by the researcher or an interpreter.

In addition to the four subscales of the Tennessee-Self-Concept Scale (family, social, physical self-esteem, and self-criticism) a total score, made of the family, social, and physical subscales was computed. Cronbach reliability alpha coefficients were .78, .77, .58, .68, and .88, respectively. Intercorrelations among the subscales are presented in Table 7.

Attitudes Toward Deaf People. The original scale, Attitudes Toward Disabled People (ATDP-O; consists of 20 Likert-type items, divided into two subscales: characteristics of the disabled and treatment of the disabled. The scale is reliable in measuring attitudes toward people with various disabilities (Altman, 1981; Furnham & Penderd, 1983; Yuker, Block & Young, 1966). Furnham and Lane (1984) modified the scale to investigate the attitudes of deaf and hearing people toward deafness. They worded the items in terms of deafness instead of disability in general, and added 11 items to the original scale related specifically to deaf people. These additional items were chosen from previous studies on attitudes toward deafness. No reliability or validity data are provided for the combined 31-item scale.

Sixteen of the ATDP-O items and 4 of the items added by Furnham and Lane were used to asses attitudes toward deaf people (Appendix H). ATDP items were eliminated because they were inapplicable to deaf people (e.g., dealing with partial and total deafness[31]), were offensive, redundant, or worded complexly. Answers were indicated on a 5-point scale from 1 ("Strongly disagree") to 5 ("Strongly agree"). The scale was signed to respondents who so preferred (5 people).

Examination of the intercorrelations among these items indicated two subscales. The first subscale consisted of 12 items dealing primarily with characteristics of deaf people (e.g., "deaf people are as happy as hearing people"), with higher scores indicating more positive attitudes toward deaf people (alpha = .77). The second subscale was made of 6 items[32] dealing with the relationships that deaf people have with other people or institutions--schools, parents, the government (e.g., "It is up to the government to look after deaf people"). Higher scores indicate a belief that deaf people should receive *no* special treatment (alpha = .69). These two factors correspond roughly to the original two subscales of the ATDP-O (Yuker, Block & Campbell, 1960), characteristics of the deaf and treatment of the deaf (although not all items correspond to the original subscales). The two subscales were not correlated (r = .13). The collective self-esteem scale (Crocker & Luhtanen, 1990; Luhtanen & Crocker, in press) provided construct validation, its private subscale correlated .62, $p < .001$ with the Characteristics of the Deaf subscale, but not with Treatment of the Deaf subscale.

The Collective Self-Esteem Scale (Luhtanen & Crocker, in press). This scale was originally developed to measure individuals' self-esteem regarding their membership in any social group or category. It does not specifically indicate which category the respondent should be thinking of while responding to the scale, and in fact assumes a

more general rather than specific sense of groups. The scale consists of four subscales. Membership esteem taps individuals' assessment of how good a member they are in their social groups. Public self-esteem measures individual's beliefs of how others evaluate those social groups. Private self-esteem assesses individuals' own evaluations of their social groups. Importance to identity measures how important the social group memberships are to the self-concept. Each of the subscales consists of four items, two worded in a positive direction and two worded in a negative direction. Respondents indicate their agreement with the items on a 7-point scale. Reliability and validity data are provided in three studies of college students (Luhtanen & Crocker, in press). In the current study this scale was used primarily to provide construct validity for the other measures.

For this study the scale was modified slightly. The Membership subscale was dropped, as it deals with choosing to be a member of a group and therefore is irrelevant to the ascribed category of deafness. In addition, rather than inquiring about any social group membership, deaf respondents were asked to keep in mind their deafness and (possible) membership in the deaf community when responding to the scale (see Appendix I). (Ethier & Deaux, 1990 made similar modifications on the scale with a Hispanic sample and obtained reliability coefficients and inter-scale correlations similar to those reported on the original scale.) A 5-point rather than a 7-point response format was used to simplify the procedure for deaf respondents with poorer English skills. The scale was signed to respondents who so preferred.

In summary, the following constructs were measured in the interviews: 1) family deafness orientation, 2) school deafness orientation, 3) group identity, 4) valuation of hearing attributes, 5) valuation of deaf attributes, 5) fantasy about being hearing, 6) signing skills, 7) oral skills, 8) hearing ability, 9) parents'

socioeconomic status, and 10) respondents' socioeconomic status. In addition, several constructs were measured using standardized questionnaires: 11) self-esteem (family, social, physical, self-criticism subscales, and total score), 12) attitudes toward deaf people (characteristics and treatment subscales), and 13) collective self-esteem (public, private, and identity subscales).

Three of these constructs had low reliability: valuation of deaf attributes, oral ability, and physical self-esteem. Despite this low reliability these variables were included in further analysis because of their theoretical importance to the model tested in the study.

Results

Comparison of volunteers to non-volunteers

People who volunteer to participate in research may be different from those who do not. In order to determine whether those deaf individuals who volunteered to participate in the second study were different from those who did not (and thus could be considered as coming from the same population), respondents who volunteered to participate further in the study were compared to those who declined to volunteer, using a series of *t*-tests and chi square tests.

With few exception, no differences were found between the two groups. Participants who volunteered to be interviewed were somewhat younger (M = 40.2) than those who did not (M = 47.6), t (261) = 3.29, $p < .001$, and they attributed the responsibility of the lower education and economic status of deaf people in general slightly more to hearing people (M = 2.19) than did respondents who did not volunteer (M = 2.00), t = (256) 2.75, $p < .006$.

Because none of the five crucial variables was different between the two groups (family and school deafness orientation, group identity, attitudes toward deaf people,

and self-esteem), and only one of the psychological mechanisms (attribution of responsibility) showed a very slight difference, both volunteers and non-volunteers may be regarded as coming from the same population and thus can be treated as one sample.

Comparison of the constructs in the two studies

Although the two studies reported here both included similar constructs aimed at testing the same theoretical model, these constructs were measured differently. The two operationalizations of Family Deafness Orientation were highly correlated between the two studies ($r = .91$, $p < .001$), as were the two measures of School Deafness Orientation ($r = .84$, $p < .001$). Group Identity was correlated $r = .62$ ($p < .001$) between the two studies and attitudes toward Deaf People in the questionnaire study was correlated $r = .48$ ($p < .001$) with Characteristics of Deaf People subscale, and $r = .43$ ($p < .003$) with Treatment of the Deaf subscale of the interview study. Finally, Self-Esteem in the questionnaire study was correlated $r = .45$ ($p < .002$) with the Total Self-Esteem score of the interview study, and with Social and Family subscales ($r = .44$, $p < .002$; $r = .36$, $p < .015$, respectively). It was not related to either Physical Self-Esteem, or the Self Criticism subscale. Although all these constructs were significantly correlated between the two studies, it is clear that the objective constructs (e.g., family deafness orientation) were more highly correlated than the subjective constructs (e.g., self-esteem).

Model testing

This study, like Study I, was aimed at testing the model in Figure 3 and the five hypotheses derived from it. First, the relationships between the ecological variables

(deafness orientation in the family and school) and the psychological variables (self-esteem, fantasy, relevance of the label "deaf", group identity, and attitudes toward deaf people) were examined. Next, the predictions from Crocker and Major's model were tested: the relationships between group identification/attitudes toward deaf people and self-esteem, and the mediating mechanisms of valuing deaf and hearing attributes. Finally, the predictions from Social Identity Theory were tested against those proposed by Crocker and Major's model.

Testing the relationship between ecological and psychological variables

Table 7 presents the zero-order correlations among the study's variables. To test for curvilinearity, Spearman rank-order correlations were calculated and compared to the Pearson correlations. Both sets of correlations were very similar, indicating that the relationships among the variables in this study were linear.

Contrary to prediction (Hypothesis 1), higher deafness orientation in the school was negatively related to overall self-esteem, $r = -.44$, $p < .022$, to social self-esteem, $r = -.30$, $p < .043$ and to family self-esteem, $r = -.51$, $p < .001$. In addition, family deafness orientation was unrelated to self-esteem (total score and all subscales), attitudes toward deaf people (both subscales), or group identity.

Although deafness orientation was not related to self-esteem in the hypothesized direction, both family and school deafness orientation were negatively related to fantasy ($r = -.32$, $p < .030$, and $r = -.38$, $p < .009$, respectively), as predicted (Hypothesis 2). In addition, school deafness orientation was positively related to relevance of label, $r = .31$, $p < .033$, and to group identity, $r = .45$, $p < .002$, (Hypothesis 2).

Table 7.

Means and Zero-Order Correlations among the Study's Variables (Study II)

	Self-Esteem total (SE_TOT)	Self-Esteem social (SE_SOC)	Self-Esteem Family (SE_FAM)	Self-Esteem Physical (SE_PHYS)	Self-Criticism (SE_CRIT)	Collective Self-Esteem Identity (SCE_ID)	Collective Self-Esteem Private (CSE_PRI)	Collective Self-Esteem Public (CSE_PUB)
SE_SOC	.788***							
SE_FAM	.825***	.440**						
SE_PHYS	.807***	.516***	.482***					
SE_CRIT	-.148	-.012	-.082	-.277				
CSE_ID	-.027	.190	-.208	-.002	.072			
CSE_PRI	.239	.302*	.115	.179	.104	.299*		
CSE_PUB	.199	.116	.024	.375**	.165	.091	-.107	
ATT_C	.277	.283	.167	.225	.037	.202	.619***	-.016
ATT_T	.420**	.334*	.454**	.188	.051	-.246	.144	-.245
SDO	-.437**	-.297*	-.508***	-.215	.030	.202	.162	.082
FDO	-.031	.074	-.033	-.110	-.058	-.214	.094	-.265
GI	-.164	.050	-.310	-.095	.117	.453**	.551***	-.030
FANTAS	.073	-.054	.150	.062	.024	-.304*	-.398**	.121
HEARVAL	.206	.018	.345*	.092	-.118	-.259	-.493***	-.031
DEAFVAL	.021	.059	.048	-.067	.036	.415**	.543***	-.088
LABEL	-.095	.019	-.102	-.140	-.012	.273	.208	-.118
AGE	.110	.146	.102	.014	.214	-.018	.014	.180
P_SES	.225	.096	.298*	.121	.187	-.112	.015	.037
S_SES	-.076	.003	-.070	-.119	.075	.194	.091	-.224

Table 7 (continued)

	Self-Esteem total (SE_TOT)	Self-Esteem social (SE_SOC)	Self-Esteem Family (SE_FAM)	Self-Esteem Physical (SE_PHYS)	Self-Criticism (SE_CRIT)	Collective Self-Esteem Identity (SCE_ID)	Collective Self-Esteem Private (CSE_PRI)	Collective Self-Esteem Public (CSE_PUB)
W_AID	-.286	-.301*	-.216	-.179	-.021	-.105	-.261	.111
WO_AID	-.321*	-.269	-.324*	-.169	-.067	.009	-.303*	.134
SEX	.117	.208	.062	.023	-.018	.211	.029	-.024
SIGN	-.066	.124	-.281	.051	.003	.405**	.601***	.001
ORAL	.433**	.310*	.520***	.176	.014	-.165	-.184	-.157
M	3.63	3.60	3.56	3.73	3.22	3.51	3.97	3.13
SD	.34	.39	.48	.39	.55	.80	.70	.73
Scale	1 - 5	1 - 5	1 - 5	1 - 5	1 - 5	1 - 5	1 - 5	1 - 5

Table 7 (continued)

	Attitudes toward Deaf Character. (ATT_C)	Attitudes toward Deaf Treatment (ATT_T)	School Deafness Orientation (SDO)	Family Deafness Orientation (FDO)	Group Identity (GI)	Fantasy (FANTAS)	Valuing Hearing Attributes (HEARVAL)	Valuing Deaf Attributes (DEAFVAL)
ATT_T	.280							
SDO	.037	-.431**						
FDO	.123	.126	.224					
GI	.459***	-.105	.472**	.193				
FANTAS	-.290	.017	-.378**	-.317*	-.495***			
HEARVAL	-.269	.215	-.611***	-.092	-.542***	.333		
DEAFVAL	.495***	.037	.020	-.167	.299*	-.232	-.045	
LABEL	-.052	-.177	.312*	.210	.212	-.314*	-.347*	
AGE	.009	.250	.053	.116	-.006	.101	-.200	-.066
P_SES	-.012	.156	-.342*	-.333*	-.256	.195	.310*	-.030
S_SES	.097	.070	-.295*	-.077	.107	-.062	.211	.324*
W_AID	-.030	-.085	-.044	.107	-.054	.055	.422**	-.044
WO_AID	-.119	-.184	.427**	.247	.022	-.156	-.043	-.114
SEX	.282	-.085	-.137	-.068	.136	-.045	.044	.211
SIGN	.446**	-.184	.590***	.367*	.817***	-.543***	-.569***	.263
ORAL	.034	.483***	-.577***	.008	-.400**	.342*	.587***	-.003
M	3.45	3.21						
SD	.62	.71						
Scale	1 - 5	1 - 5						

Table 7 (continued)

	Self-Labeling (LABEL)	Current Age (AGE)	Parents' Socioeconomic Status (P_SES)	Subject's Socioeconomic Status (S_SES)	Hearing with a hearing aid (W_AID)	Hearing without a hearing aid (WO_AID)	Gender (SEX)	Signing ability (SIGN)
AGE	.126							
P_SES	-.239	-.129						
S_SES	-.308*	-.357*	.204					
W_AID	-.400**	-.243	.159	.222				
WO_AID	-.155	-.016	-.412**	-.182	.326			
SEX	.046	-.043	-.009	.182	-.017	-.202		
SIGN	.352*	.003	-.324*	-.023	-.074	.066	.112	
ORAL	-.362*	-.037	.345*	.143	.120	-.185	.163	-.352*
M		28.30	44.77	51.15	1.19	2.53	.57	
SD		7.07	13.54	22.25	.90	.91	.50	
Scale		16-42	8-66	8-66	0-3	1-5	1,0	

Notes.

1. * $p < .01$; ** $p < .01$; *** $p < .001$; all two-tailed tests.
2. Gender is coded 0 = males, 1 = females.
3. Scales where means and standard deviations are not reported were constructed from standardized subscales.

School deafness orientation was also negatively related to attitudes toward deafness (treatment subscale), $r = -.43$, $p < .003$, such that respondents who attended schools with higher deafness orientation believed that deaf people should be treated differently than hearing people (e.g., attend deaf schools, receive help from the government).

Other ecological variables included in this study were ability to hear, socioeconomic status, and communication skills--oral and manual. Self-esteem was negatively correlated with the ability to hear with ($r = -.29$, $p < .052$) and without a hearing aid ($r = -.32$, $p < .028$), such that those respondents who were "more deaf" had higher self-esteem. Not surprisingly, higher deafness orientation in the family and school were negatively related to socioeconomic status, $r = -.33$, $p < .022$, and $r = -.34$, $p < .019$, respectively.

Better (reported) signing skills were positively related to deafness orientation in the family and school, attitudes toward deaf people (Characteristics subscale), group identity, and the acceptance of the label "deaf" (r's = .37, .59, .45, .82, and .35, respectively). Signing was negatively related to fantasy ($r = -.54$, $p < .001$, and was not related to self-esteem. Oral ability, on the other hand, was positively correlated with total self-esteem and family self-esteem ($r = .43$, $p < .001$, and $r = .52$, $p < .001$, respectively). It was also related to the treatment of deaf people subscale, $r = .48$, $p < .001$, providing construct validation: those respondents with better oral skills felt that deaf people should not be treated differently from hearing people.

It was predicted (Hypothesis 2) that four constructs mediate the relationship between deafness orientation in the family and school and self-esteem: (a) fantasy; (b) the relevance of the label "deaf"; (c) group identification; and (d) attitudes toward deaf people.

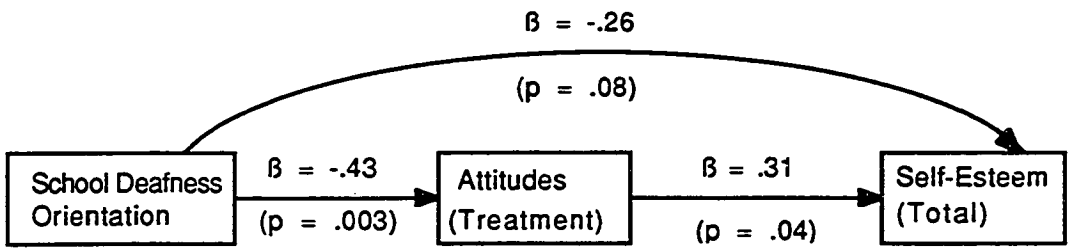
The correlational analysis indicated that of the four constructs, only attitudes toward deaf people (Treatment subscale) was related to self-esteem (total score, family, and social). In addition, group identification was (negatively) related to family self-esteem. Further, school, but not family deafness orientation, was related to both attitudes toward deaf people (treatment subscale) and group identity. Using reduced form equations (Cohen & Cohen, 1983), the mediating effects of (a) attitudes toward deaf people (treatment subscale only) and (b) group identity on the relationship between school deafness orientation and self-esteem (total, family, and social) were examined.

Attitudes toward deafness as a mediating variable was considered first. Figure 8a shows that school deafness orientation had a marginally significant direct effect on self-esteem, ß = -.26 ($p < .08$). It also accounted for a significant amount of variance in attitudes (ß = -.43, $p < .003$). Attitudes had a direct effect on self-esteem with ß = .31 ($p< .04$). The indirect effect of group identity on self-esteem (total) was -.43 X -.31 = -.13. Although the direct effect of school deafness orientation on self-esteem (total score) was not significant, it was greater than the indirect effect. It therefore must be concluded that no mediation occurred.

A similar pattern emerged when the social and family self-esteem subscales were considered. Attitudes toward deaf people (treatment subscale) did not mediate the relationship between deafness orientation in the school and social self-esteem (direct effect = -.26, n.s.; indirect effect = -.12; see Figure 8b). It also failed to mediate the negative relationship between school deafness orientation and family self-esteem (direct effect = -.34; indirect effect = -.13; Figure 8c).

Next, the mediating effect of group identity on the relationship between school deafness orientation and family self-esteem was considered. Figure 8d shows that

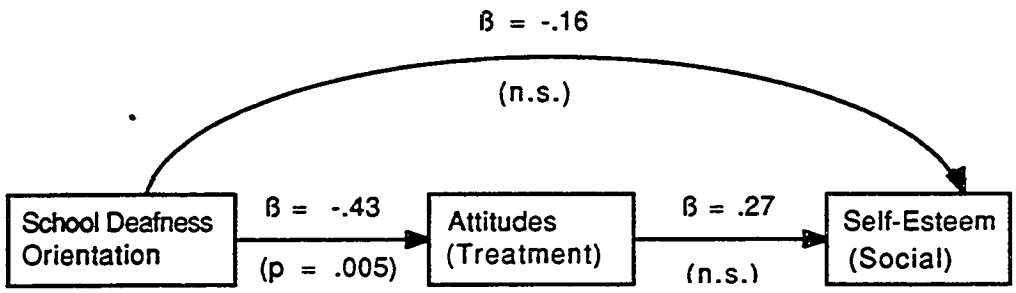
group identity did not have a direct effect on family self-esteem (when school deafness orientation was controlled). Group identity, therefore, did not mediate the relationship between school deafness orientation and family self-esteem.



Indirect effect = -.43 * .31 = -.13

Total effect = -.26 + (-.13) = -.39

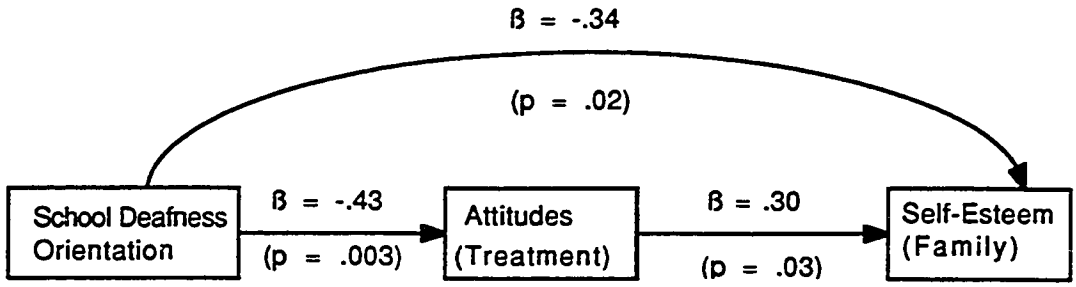
Figure 8a. The mediation effect of attitudes on the relationship between school deafness orientation and total self-esteem. (Study II)



Indirect effect = -.43 * .27 = -.12

Total effect = -.16 + (-.12) = -.28

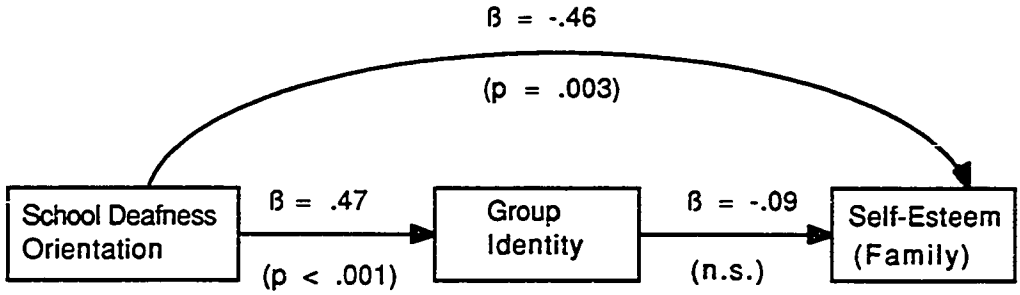
Figure 8b. The mediation effect of attitudes on the relationship between school deafness orientation and social self-esteem. (Study II)



Indirect effect = -.43 * .30 = -.13

Total effect = -.34 + (-.13) = -.47

Figure 8c. The mediation effect of attitudes on the relationship between school deafness orientation and family self-esteem. (Study II)



Indirect effect = .47 * -.09 = -.04

Total effect = -.46 + (-.04) = -.50

Figure 8d. The mediation effect of group identity on the relationship between school deafness orientation and family self-esteem. (Study II)

As in Study I, analyses were conducted to determine whether (a) fantasy; (b) the relevance of the label "deaf"; (c) group identification; and (d) attitudes toward deaf people moderated the relationship between deafness orientation and self-esteem. None of these analyses were significant. The failure to replicate the moderation effects from the first study is probably due to the difference in sample sizes. As was noted earlier, although statistically significant, the reported moderation effects were of rather small magnitude. The smaller sample size of the second study did not enable detection of these small effects.

In summary, data did not support Hypothesis 1 regarding the relationship between deafness orientation and self-esteem. On the contrary, school deafness orientation had a negative relationship with self-esteem. Moreover, oral, but not signing ability was related to self-esteem. These findings suggest that deaf people with stronger affiliations with the mainstream, rather than those with stronger identification with the deaf community, had higher self-esteem. The mediation analyses (Hypothesis 2) supported this conclusion. Specifically, group identity did not mediate the negative relationship between deafness orientation in the school and family self-esteem.

Although fantasy and relevance of the label "deaf" were related to deafness orientation in the predicted direction (Hypothesis 2), they were not related to self-esteem. Thus, contrary to prediction, they did not mediate the relationship between deafness orientation and self-esteem.

Testing Crocker and Major's model

Contrary to prediction (Hypothesis 3) group identity was unrelated to overall and social self-esteem, and negatively related to family self-esteem ($r = -.31$, $p <$

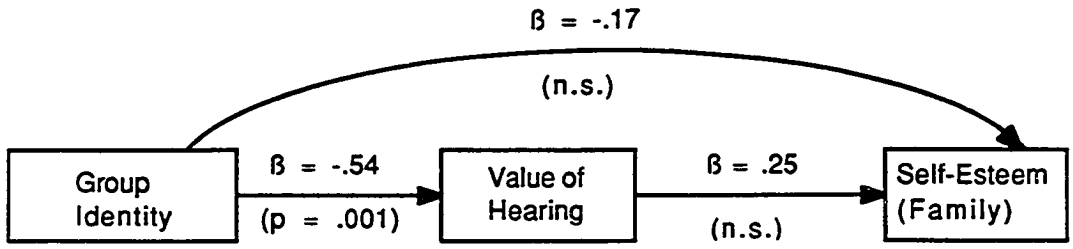
.03). Self-esteem was unrelated to the characteristics subscale of the attitude questionnaire, but significantly related to the treatment subscale, $r = .42$, $p < .004$, indicating that those respondents who believed that deaf people should not be treated differently from hearing people had higher self-esteem. Self-esteem (total score) was also unrelated to valuation of hearing or deaf attributes. Family self-esteem was positively related to the valuation of hearing attributes, $r = .34$, $p < .018$, and negatively related to group identity, $r = -.32$, $p < .031$.

Attitudes toward deaf people (Characteristics subscale) were positively related to group identity, $r = .45$, $p < .002$. As predicted (Hypothesis 4), both attitudes (Characteristics) and group identity were positively related to valuing deaf attributes ($r = .50$, $p < .001$; $r = .30$, $p < .038$, respectively).

Using reduced form equations (Cohen & Cohen, 1983), the mediating effect of valuation of hearing attributes on the relationship between group identity and family self-esteem was examined. (As reported in the correlational analysis, the other mediation effects proposed by the model were not tenable.)

Figure 9 shows that neither valuation of hearing attributes nor group identity had a direct effect on family self-esteem (ß's = .25, -.17, respectively). It must be concluded, therefore, that contrary to prediction (Hypothesis 4) the valuation of hearing attributes did not mediate the relationship between group identity and family self-esteem.

Analyses also failed to show a moderation effect of the valuation of deaf and hearing attributes on the relationship between group identity/attitudes toward deaf people and self-esteem.



Indirect effect = -.54 * .25 = -.14

Total effect = -.17 + (-.14) = -.31

Figure 9. The mediation effect of the value of hearing attributes on the relationship between group identity and family self-esteem. (Study II)

In summary, neither valuing deaf attributes nor devaluing hearing attributes mediated the relationship between group identity or attitudes toward deaf people and self-esteem. Moreover, family self-esteem was positively related to valuing hearing attributes and negatively to group identity, and total self-esteem was related to attitudes toward deaf people such that those respondents who believed that deaf people should not be treated differently from hearing people had higher self-esteem. These findings suggest that those deaf people who had a hearing outlook and greater speaking capabilities had higher family self-esteem, suggesting that their relationship with their (in most cases) hearing families were better than those deaf people with a deaf outlook.

Testing Social Identity Theory against Crocker and Major's model

The multiple regression analyses did not yield support for the model proposed by Crocker and Major (1989). Rather, it seems that deaf people who assimilate into the hearing world have higher self-esteem than those who identify more strongly with

their group. A cluster analysis was performed to create a typology of the respondents and to determine whether specific profiles are associated with higher levels of self-esteem based on the data gathered in the interviews. Ward's method (1963) was used again to classify respondents on the following variables: family and school deafness orientation, attitudes toward deaf people (Characteristics and Treatment subscales), group identity, fantasy, and valuation of deaf and hearing attributes. Family deafness orientation and valuation of deaf attributes failed to distinguish between the clusters. For clarity of presentation, the analysis was run again omitting these two variables.

A plot of the coefficients at which the clusters fuse (see Appendix J) suggested that after five clusters no significant information was added by dividing the sample into more clusters. A five-cluster solution was therefore selected. Figure 10 portrays the profiles of the five clusters (see Appendix K for portrayal of individual clusters).

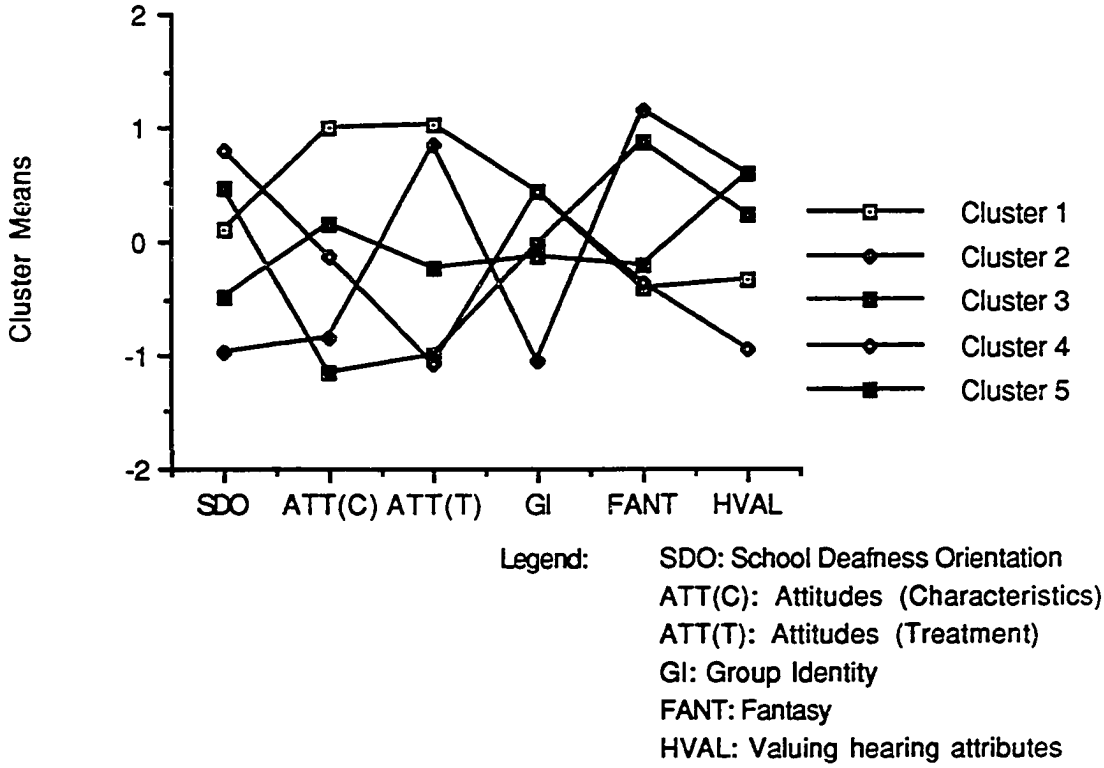


Figure 10. Five clusters (Study II).

Table 8 reports standard scores for each of the five clusters on the six cluster variables. All univariate tests of cluster differences on these variables were significant.

Table 8

Standard Scores of Cluster Variables and Analysis of Variance across Clusters (Study II)

	Cluster						
	1 n = 12	2 n = 7	3 n = 6	4 n = 9	5 n = 12	*F*	Scheffe (post-hoc comparisons)
School Deafness Orientation							
M	.099	-.973	.459	.800	-.484	9.68***	4 > 2, 5
SD	.883	.047	.504	.742	.544		3, 1 > 2
Attitudes (Characteristics)							
M	1.008	-.839	-1.156	-.128	.156	13.48***	1 > 2, 3, 4
SD	.348	.999	.393	.538	.906		5 > 3
Attitudes (Treatment)							
M	1.038	.848	-.994	-1.072	-.232	35.39***	1, 2 > 3, 4, 5
SD	.688	.477	.392	.423	.348		5 > 4
Group Identity							
M	.426	-1.043	-.038	.441	-.125	23.59***	1, 4 > 2, 5
SD	.318	.280	.214	.273	.494		3, 5 > 2
Fantasy							
M	-.403	1.153	.862	-.356	-.195	12.89***	2, 3 > 1, 4, 5
SD	.340	.633	.249	.562	.804		
Valuing Hearing Attributes							
M	-.322	.592	.243	-.961	.587	9.95***	2, 3, 5 > 4
SD	.872	.491	.649	.523	.513		5 > 1

Note. df = 4, 45. *** $p < .001$.

Description of Clusters

Cluster 1: Positive Deaf (n = 12). These respondents did not go to deaf schools, but they have positive attitudes toward deaf people, their group identity is higher than all other clusters, they fantasize least about being hearing, and they feel that hearing attributes are not important. They also believe that deaf people should not receive treatment different from hearing people. Cluster 2: Hearing Deaf People (n = 7). These people went to schools with the least deafness orientation, they have negative perceptions of deaf people and low group identity, they feel that deaf people should not receive special treatment, they fantasize most about becoming hearing and they value hearing attributes. Cluster 3: Deaf Background/Want to be Hearing (n = 6). These participants went to deaf schools, but they have negative perceptions of deaf people, their group identity is neutral, they fantasize about being hearing, and they value hearing attributes. They also believe that deaf people should be treated differently from other people. Cluster 4: Deaf Background: Mixed (n = 9). People in this cluster went to deaf schools, their attitudes toward other deaf people are neutral, and their levels of group identity are average. At the same time, they have relatively high group identity, they do not fantasize about being hearing, and their valuation of hearing attributes is low. They also feel that deaf people should get special treatment. Cluster 5: Averages ($n = 12^{33}$). Scores on most variables for this cluster are average, expect for school deafness orientation (rather low) and valuation of hearing attributes (rather high).

For the most part, respondents from Study I fell into the same clusters in both studies, especially the Hearing Deaf People. Deaf Power and Hearing Background/Current Deaf cluster respondents from study I were the same respondents as Positive Deaf cluster people in study II. The profiles were unrelated to the demographic variables of sex, age, age at onset of deafness, ability to hear speech with

or without hearing aids, parents' socioeconomic status and participants' own socioeconomic status.

It was predicted from Social Identity Theory that the Deaf Power and the Hearing Deaf People clusters (1 and 2) would have equally high self-esteem. Crocker and Major's (1989) model would predict, however, that the Deaf Power and the Deaf Background-Mixed profiles (both having high group identification) would have higher self-esteem than the Hearing Deaf People (who have no group identification; Hypothesis 5).

A multivariate analysis of variance performed on the four subscales of the self-esteem questionnaire was significant, Hotelling's $F = 1.86$, $p < .029$. Univariate analyses on these subscales as well as on the total score demonstrated significant effects for the total score, F (4,45) = 4.72, $p < .003$, and for family self-esteem, F (4,45) = 5.26, $p < .002$. Self-esteem means for the five clusters are presented in Table 9.

Table 9.
Means of Self-Esteem Subscales by Clusters (Study II)

	Clusters						
Self-Esteem	1 n = 12	2 n = 7	3 n = 6	4 n = 9	5 n = 12	*F*	Scheffe (post-hoc comparisons)
Total	3.72	3.71	3.43	3.37	3.85	4.72**	5 > 4
Family	3.67	3.85	3.29	3.15	3.80	5.26**	1, 2 > 4
Social	3.68	3.60	3.31	3.46	3.81	2.37	--
Physical	3.81	3.67	3.71	3.50	3.93	2.01	--
Critical	3.24	3.37	3.00	3.49	3.03	1.30	--

Note. ** $p < .01$

Post-hoc Scheffe tests indicated that Cluster 5 (Averages) had significantly higher overall self-esteem than Cluster 4 (Deaf Background-Mixed); Clusters 1 (Deaf Power) and 2 (Hearing Deaf People) had higher family self-esteem than Cluster 4 (Deaf Background-mixed). These results do not provide strong support for either theory, although they offer more support for Social Identity Theory than for Crocker and Major's model. Clusters 1 and 2 were not expected to have different levels of self-esteem according to SIT, and indeed they did not differ.

CHAPTER V

CASE STUDIES

Two clusters emerged in both studies: Deaf Power (Positive Deaf) and Hearing Deaf People. The Deaf Power cluster of Study II seems to be composed of two clusters from the first study: Deaf Power, and Hearing Background-Current Deaf. It may be useful to present case studies representing each of these three clusters to illustrate in greater detail the phenomena of interest and to provide a more interpretive comparison of Social Identity Theory and Crocker and Major's model.

In addition to the qualitative descriptions, scores on all relevant variables for these three individuals are presented in Table 10. Two of the people represent the Deaf Power cluster, one from a deaf background and one from a hearing background. The third case study represents the Hearing Deaf People cluster.

Table 10.
Scores for 3 Participants on Criterion Variables

		Amanda	Mark	Kevin
*	School Deafness Orientation	-.53	.75	-.99
*	Family Deafness Orientation	-.30	1.60	-.02
*	Attitudes (Characteristics)	1.55	1.06	-.72
*	Attitudes (Treatment)	1.58	1.58	-.06
*	Group Identity	.91	.65	-1.25
*	Fantasy	-.12	-.91	1.18
*	Valuing Hearing Attributes	-1.30	-1.53	.30
#	Self-Esteem (Totai)	3.72	3.80	3.77
#	Self-Esteem (Family)	3.33	3.61	4.06
#	Self-Esteem (Social)	3.83	3.89	3.72
#	Collective Self-Esteem (Public)	3.00	3.25	3.75

Note. * standardized scores. # raw scores, scale 1 - 5.

Deaf Power (hearing background): Amanda Scott[34].

Amanda typifies the Cluster 1 individual. She is a White woman in her thirties from a middle-class background, the second of two daughters and the only deaf person in her family. She became deaf at the age of 2 as a result of an illness. While growing up Amanda used oral English only in communicating with her family.

In addition to having a hearing family, Amanda had relatively little contact with deaf peers during her childhood. Although she attended an oral deaf school during the elementary school years, she was the single deaf student in her junior high and high schools. When asked how she managed school without support services she said: "I was lucky. I slept a lot in class, I was absent a lot, and I just got by. I passed just by the skin of my teeth." She learned to sign a little while she was in high school from friends who attended high schools were sign language was used. But not until several years after high school did she learn sign language well and start to socialize with deaf people. That happened when she went to the National Technical Institute for the Deaf (NTID)[35].

She decided to go to NTID rather than Gallaudet[36] because she felt that NTID combined both worlds--deaf and hearing. Because she grew up in a hearing family and went to oral and hearing schools, Gallaudet seemed "too deaf" an environment. She did not want to go to a hearing college: "I really hated high school, it wasn't good for me, and a hearing college would have been the same thing again...NTID was a great experience for me. The deaf classes, the students signing, many of the teachers signed... I had interpreters." She received an Associates degree at NTID and then went on to obtain a B.A. and a Masters degree at a hearing university. "I went through [college and graduate school] with an interpreter. In high school I had nothing; in college, I required an interpreter!"

Her involvement with deaf people and organizations has been increasing steadily.

At the time of the interview Amanda was a member and a leader of various deaf political organizations and subscribed to many deaf publications. She also spends a lot of time socializing with her deaf friends; 90% of her friends are deaf. Although she is romantically involved with a hearing person, she communicates with him in ASL. "He supports ASL, he supports deaf culture, he supports the deaf community, so I feel like I connect with him".

When asked about her identification with other deaf people she said that she strongly identifies with them, feels close to, and has much in common with them. She supported the Gallaudet protest very strongly. She would prefer to have deaf children "because of communication. I envy families that I see around [where parents and children are deaf], but if they were hearing... I would accept them" and would communicate with them in sign, "of course; I would teach them...ASL". She recommends that ASL be used in teaching deaf children, "as many deaf teachers as possible and hearing people skilled in ASL". She believes that English should be taught as a second language. She also advocates deaf schools over mainstreaming: "I think it is important that deaf children learn with other deaf children for social reasons, for reasons of identification [and] leadership". She said she would probably join a "deaf nation" if there was one, "it would make me feel strong and confident... and it would be fun".

Amanda's preference for contact with deaf people extends to her work-place as well. She works in an agency that has a deaf program and prefers to work with deaf clients because of communication: "it feels more normal for me, more natural. With hearing it's awkward, the communication doesn't really work", although her reported speech and lipreading skills are good.

Her strong associations with deaf people and organizations goes hand in hand with her lack of appreciation for hearing attributes. At the time Amanda started to be politically involved in deaf issues, she also stopped wishing she were hearing, although

when asked about a possible "cure" for deafness she seemed ambivalent. She might take a pill but she would not pay for it ("I have other priorities"), she would consider an operation but "if it required them to cut my ear off or something, or put all these funny things on my face and head, then forget it!" She also objects strongly to the cochlear implant.

Amanda indicated that being able to do things that hearing people can easily do is not important: talking on the telephone, "I do fine with the TTY and the relay service"[37] and clear speech, "It is easier to use speech in the hearing world. On the other hand, there are more important things to be concerned about...than...talking".

Amanda has positive attitudes toward deaf people and she believes that they should not be treated differently than hearing people. Her self-esteem scores are in the average range, although she has the lowest score on the family self-esteem scale of the three people presented here. This score indicates dissatisfaction with her family relationships: "Sometimes I get really angry at my parents [for] no[t] signing...I feel it is important for parents to learn ASL to communicate with their children... I'm in touch with my parents now but it's very superficial, there is no emotional depth; and with my sister it's the same."

When asked what she thought was the reason for the shift in her life--from relatively little contact with deaf people and sign language in childhood, to her active deaf social and political life in adulthood--Amanda said that the change started at NTID, socializing with other deaf students and learning sign language. But her associations with deaf people became even stronger later: "I met so many wonderful deaf people, so many great people who were proud of their deafness. I never met people like that before...they accepted themselves and they were happier because they were more complete."

Deaf Power (deaf background): Mark Angus.

Mark is a White man in his late thirties from a working class background. He was born deaf, the second deaf child of deaf parents. At home the family communicated in ASL. His family was a part of the deaf community and from a very young age he socialized with other deaf people: "growing up I used to go to deaf church with my family, [to] picnics. Most of the time we'd interact [and socialize] with other deaf people."

He also attended a deaf residential school. It was an oral school, however: "no sign, they didn't permit signing...in the classroom - no sign, in the dorm - yes, in sports, in competitions - yes, playing outside - yes, we signed, but in the classroom it was forbidden!" The teachers in the school were all hearing. "There was one teacher who was herself hearing but her [parents] were deaf and she would sometimes use sign. She would look around to make sure that nobody was [in the hall], she would close the door and she would sign to us. She was one of my favorite teachers!"

Signing in the class was not only forbidden, it was severely punished. "In primary school...the principal saw me signing. He took me out of the classroom to his office, and he said, 'if I see you sign again...' and he showed me a paper-cutter, 'I'll cut your hands with this'. [His] name-sign[38] was 'hand-cutting' because that's what he was best known for."

Mark perceived the oralism in school to have been detrimental to him in several ways. First, it was terrifying to anticipate punishment if and when he was caught signing in the classroom. It was also difficult to understand the teachers: "I would read lips, it was really frustrating, it was a traumatic experience for me. I would say I missed five years [of education] there...because they taught me to read lips for five years. And only now I'm picking up... There is still a lot of anger inside, I wish they

would have used sign in school". In addition, the oralism in school created "a conflict between the family and the school. At home my mother taught us sign, at school [there was] no sign; they said it was bad, and that was a real conflict." After high school Mark went to Gallaudet: "finally I could sign in the classroom!" After graduating from Gallaudet he attended a hearing university (with interpreters in the classroom) and received a Masters degree.

His early involvement with deaf people continued into adulthood. At the time of the interview Mark was working as a teacher of ASL to hearing people, "I like that! That's what I've wanted to do for a long time". He strongly supported the Gallaudet protest, "it's common sense that there should be a deaf president. Why do the hearing control a deaf university?" He is also member of various deaf organizations and subscribes to numerous deaf-related publications.

When asked whether he would want deaf or hearing children he said, "That's a silly question, deaf children [because of] connection, sign language, [it's a] must! If I had hearing children [I would teach them sign], of course, but...it's different."

Mark believes that deaf children should be taught English through ASL, and that it does not matter whether their teachers are deaf or hearing as long as they know ASL. He strongly opposes mainstreaming because there is "no deaf culture there". He recounted an incident related to mainstreaming: "Two years ago I gave a lecture at a mainstreaming program. Deaf kids were grabbing me [and asked so many] questions: 'can deaf go to college?', 'can deaf do this?', 'can deaf do that?' They didn't know anything, they have had no exposure, it was really sad."

Seventy five percent of his friends are deaf. Although his lover is hearing they communicate in sign language: "[at first] we would write or [communicate] through a hard-of-hearing roommate who knew sign who would interpret for us...and then he

learned to sign".

Mark said he never wished to be hearing; before I was able to complete the question about a potential "cure" for deafness he said, "I would jump off a bridge if they forced me to become hearing! I don't want it, no, I don't want it!"

Like Amanda, his appreciation of deaf culture goes together with lack of appreciation for hearing activities: he does not wear hearing aids, and he believes that it is not important to use the telephone ("the relay service is wonderful!"), hear music, or have clear speech. He does think, however, that lipreading is very important "for survival, it helps".

Having known deaf people all his life, Mark has positive attitudes toward other deaf people and toward himself, indicated by his relatively high self-esteem score (especially the social subscale).

Hearing Deaf People: Kevin Norman.

Kevin is a White male in his thirties from an upper-middle class background. He was born deaf, the oldest of four siblings. Two of his siblings have some hearing impairment, although he is the only one with bilateral profound deafness. He has always used only oral English to communicate with his family. "It was no problem. My mother said that she spent three hours a day for three years when I was 3 - 5 years old, teaching me how to speak and lip-read and develop my hearing skills".

Kevin went to hearing schools all throughout his school years. When asked about understanding the teachers in the class, he commented: "I think I followed what the professors said in class more or less... I'm sure I missed a hell of a lot. I'm not clear about that, actually." His parents did not ask for special services from the school because "my mother really wanted me to live a normal life as much as possible. I think she felt that my going to a professional or speech therapy...will tend to give me an

inferiority complex because the message implicit in that is that I have a defect." After high school Kevin went to a hearing college and graduated with a B.A. degree in liberal arts.

At the time of the interview Kevin was self-employed in a technical/creative field and had virtually no contact with other deaf people through his work. In his social life he did not have any contact with other deaf people either.

He had two long-term relationships in the past, both with hearing women. He had never gone out with a deaf woman, "I've never [met] one, pretty much". He has one deaf acquaintance, but he has not seen him in 2 - 3 years. Other than that "I don't have many friends; I seem to be in a sort of a little box of my own making." He would prefer to marry a hearing woman, and when he has children he wants them to be hearing because "it's better to be hearing than deaf; it's better to have two legs than one...it's better to be whole, with full faculties." Kevin does not belong to any deaf organizations, does not attend deaf-related social activities, and does not subscribe to any deaf publications. Generally, "I feel separate from deaf people, I feel distinct from them...my perception of deaf people at large is that they are so into sign language way of life and I don't identify with that, so it's a real sense of separateness".

His own way of life guides his prescription for others. He recommended that deaf children be educated in the same manner as hearing children, in the mainstream and using oral English. He felt that sign language advocates are "hysterical" in their extreme position. Commenting on the Deaf President Now protest at Gallaudet he said, "I thought it was great that they got a deaf professor. On the other hand I had very mixed feelings about him because he is part of the signing school [of thought]. Having the head of the college insisting on sign only I feel is wrong. This is going to enforce the impression on society that deaf people can only go to signing school, which is something

I disagree with".

Kevin said that he wished to be hearing "sometimes, but I don't deal with that much". He thinks about it "when people have to call me up I have to give them 22 [digits] instead of just 7 because of the telephone relay service, it's kind of a pain. If I could hear I wouldn't deal with that, that inconvenience, it might be easier for me to get jobs." If scientists invented a pill that could "cure" deafness, "I think I might [take it], I'd give it a lot of thought". He was about to see a specialist about the possibility of a cochlear implant the week after the interview, and said he would undergo the procedure "if it's a really big improvement". When asked about payment, he thought the procedure may cost $20,000. "The money is secondary; if I really wanted I could get the money."

His hearing orientation is also revealed in his valuing the things that hearing people can do. Kevin believes that using the telephone, having clear speech and being able to read lips are important. He also believes that he has clear speech[39] and he attempts occasionally to communicate with people orally on the phone.

Kevin's attitudes toward deaf people are negative. His self-esteem, which is apparently derived from his perceived success in the hearing world, is rather high, especially his family self-esteem: " I have a very good relationship with my parents."

Conclusion

Examination of the scores presented in Table 10 shows that both Amanda and Mark (Deaf Power people) have higher social self-esteem scores than Kevin (a Hearing Deaf person). Despite Kevin's insistence that he is superior to other deaf people because of his assimilation in the mainstream, his social life suffers from his inability to communicate efficiently with either hearing and deaf people. The family self-esteem

scores show that of the three case studies Amanda has the lowest score. This probably represents the anger she feels toward her parents because they never learned to sign. From her current position as a deaf adult who has learned to sign and has been integrated into the deaf community, Amanda resents her parents' refusal to use sign language. Both Mark and Kevin live their adult lives in agreement with the way they were brought up in their families, accounting for their higher family self-esteem score.

Because the total self-esteem score is made up of the social and family subscales (plus physical self-esteem for which no differences were found between the clusters), the relative contribution of these two scales cancel each other, such that the total self-esteem scores for all three individuals are very similar.

CHAPTER VI

DISCUSSION

The two studies presented here were set out to test the model presented in Figure 3. This model proposed a relationship between the ecological variables of family and school deafness orientation and self-esteem, mediated by group identification and attitudes toward deaf people. In addition, the association of group identification and attitudes toward deaf people with self-esteem was hypothesized to be mediated by four psychological mechanisms suggested by Crocker and Major's model (1989), (a) ingroup comparisons, (b) valuing minority attributes, (c) devaluing majority attributes, and (d) attributing poor outcomes to prejudice against the group. Finally, the prediction derived from Social Identity Theory (SIT; Tajfel, 1981) that people with high and low group identifications would have comparable levels of self-esteem was tested against the prediction made by Crocker and Major's model, that those minority group members with stronger group identification will have higher self-esteem.

Although the model, as stated, was not supported by the data, several findings support its partial viability in studying deaf individuals. Especially interesting are results of the moderation analyses of study I. Group identity moderated the relationship between deafness orientation (both school and family) and self-esteem. The lower the level of group identity, the more negative was the relationship between deafness orientation and self-esteem; this relationship was especially pronounced in the high levels of deafness orientation. This interaction indicates that for deaf people who grew up in a strong deaf environment identification with the deaf community or its absence had a marked effect on their self-esteem such that stronger identification was related to higher self-esteem. In contrast, for those people who grew up in a hearing

environment, the level of identification with the deaf community had no effect on self-esteem. It is not surprising that for those deaf people who grew up in a deaf home and/or school, current associations with other deaf people was an important determinant of their feelings of self-worth; it was not important, however, for those people who grew up in a hearing environment.

These interactions highlight the importance of studying psychological variables in an ecological context. Family deafness orientation by itself was not related to self-esteem in either study; school deafness orientation had no relationship to self-esteem in study I, and it was negatively related to it in study II. Failure to study the interactive effect of deafness orientation and group identity on self-esteem would have led to the conclusion that neither variable affected self-esteem. Although the hypothesized mediation model was not supported by these data, the coexistence of both ecological and psychological variables contributed to higher self-esteem.

In a similar vein, ingroup comparisons and the importance of speech moderated the relationship between group identity and self-esteem. Although ingroup comparisons itself was negatively associated with self-esteem, it had a positive moderating effect such that for those who compared themselves to other deaf people, the relationship between group identity and self-esteem was more positive. In contrast, for those deaf respondents who compared themselves to hearing people, the relationship between group identity and self-esteem was close to zero. Interestingly, this effect was most pronounced in the low levels of group identity; comparisons to deaf or hearing people was an important determinant in the self-esteem of respondents who were not associated with the deaf community. This finding provides qualified support for Crocker and Major's model. The joint occurrence of group identity and ingroup comparisons resulted in higher self-esteem compared to the effect of either variable

alone.

Further (albeit qualified) support for Crocker and Major's model is provided by the finding that the importance of speech moderated the relationship between group identity and self-esteem. The lower the importance accorded to clear speech--indicating rejection of hearing values--the more positive was the relationship between group identity and self-esteem. The relationship between group identity and self-esteem approached zero when clear speech was considered very important. Once again, the joint occurrence of high group identity and low importance of speech produced the highest levels of self-esteem.

Other findings--especially from study II--however, paint a different picture. Oral ability was positively related to self-esteem, and the belief that deaf people should be treated no differently from hearing people partially mediated the relationship between deafness orientation and self-esteem. These findings support the conclusion that deaf people with an assimilationist view had higher levels of self-esteem. In addition, results of the cluster analyses in both studies pitting the prediction from SIT against that derived from Crocker and Major's model tended to support the former but not the latter. Clusters with high group identity and those with low group identity had comparable levels of self-esteem.

The failure to support Crocker and Major's model may be explained in several ways.

Limitations of the "Self-protective properties of stigma"

Crocker and Major's (1989) moderation model is a very general one, presumed to apply to a diverse set of stigmatized groups: ethnic and racial minorities, people with disabilities, and others. The theorists acknowledge, however, that several factors may

moderate the effects that the particular stigma and its associated psychological mechanisms have on self-esteem. They note, for example, that some majority attributes are more highly valued in our society than others, and thus are more difficult to devalue by the minority.

Two such areas are educational achievement and economic status, on which much emphasis is placed in our culture. Most (although not all) respondents in Study II agreed that deaf people have lower education and economic status compared to the hearing majority. When asked whether they themselves were more similar to deaf or to hearing people in their education or employment level, almost three times as many respondents said they were similar to hearing people as those who compared themselves to other deaf individuals. These comparisons were unrelated to actual socioeconomic level. These results are not unlike Crosby's (1984; Crosby, Clayton, Alksnis, & Hemker, 1986) findings with women who acknowledged the existence of sex discrimination in the work place, and yet did not perceive being discriminated against. One possible reason for such denial of personal discrimination is that acknowledging that one is a victim of discrimination may reflect badly on one's judgment and character. Some of the respondents in this study, for example, blamed the lower levels of economic status not only on discrimination, but on deaf people themselves who accept jobs with lower pay, and who do not fight discriminatory practices by employers. To value education and occupational prestige and at the same time to admit to not having them would probably be detrimental to one's self-esteem. Thus, most respondents in this study did not devalue education and high economic status, and compared themselves to hearing people in both domains. These results, then, failed to support the hypothesis that most deaf people will devalue majority attributes and use ingroup comparisons.

Another moderating factor offered by Crocker and Major (1989) is the

centrality of the stigma in one's self-concept. The use of the psychological mechanisms, they suggest, would depend in part on the importance of the stigmatizing condition in the self-concept of the individual. This centrality was measured in the present study by the identity subscale of the collective self-esteem questionnaire (Luhtanen & Crocker, in press), including items such as "In general, being deaf is an important part of my self-image". The correlational analysis revealed that, indeed, people who felt that deafness was more important to their self-concept valued deaf attributes more and tended to value hearing attributes less than those whose deafness was not as central.

Although the mediation model was not supported by the data, some of the psychological mechanisms offered by the model moderated the relationship between group identity and self-esteem. This moderation effect may be incorporated into a revised model and tested with other minority groups to test its generalizability.

Considering the historical context that surrounds deaf people in the United States may provide another interpretation for the current results. Crocker and Major's model suggests that group identification results in higher ethnocentrism, "the self-centered scaling of all values in terms of the ingroup" (LeVine & Campbell, 1972, quoted in Tajfel, 1982, p. 7). Deaf respondents in the current studies, however, did not exhibit high levels of ethnocentrism. Failure to show ethnocentrism was evident in two ways: (a) by the positive relationship between hearing attributes (e.g., oral skills, comparisons to hearing people) and self-esteem, and (b) by the low percentage of people who belonged to the Deaf Power clusters (14% and 25%[40] in Studies I and II, respectively). The lack of ethnocentrism explains the existence of "Hearing Deaf People"; people who have a minority status by virtue of a physical condition, but who advocate strongly (and sometimes vehemently) a majority position (i.e., oralism). This phenomenon is not unlike advocacy against affirmative action by members of racial

minorities (e.g., Justice Clarence Thomas), or against bilingual education for Spanish-speaking children (Rodriguez, 1982), or opposition to pro-choice policies voiced by women (Ginsburg, 1989).

Several studies have demonstrated that ethnocentrism is related to the improvement in social status of minority groups. This was found among Maoris in New Zealand (Vaughan, 1978a, 1978b) and southern Italians living in north Italy (Capozza, Bonaldo, & Di Maggio, 1979, cited in Tajfel, 1982). In other words, members of minority groups exhibited ethnocentrism only when their status improved somewhat vis a vis the majority; those groups whose status was very low were likely to exhibit outgroup favoritism.

The lack of ethnocentrism found in the current studies may be thus explained by the fact that deaf people have not yet made large strides toward changing their social status in the United States. Their history of fighting for their rights is rather short (the major "battle" for equality did not occur until 1988 with the Deaf President Now protest at Gallaudet), and their visibility is low; not until September 1991 did a deaf actor play a leading role in a television series. In contrast, television shows in which members of other minority groups (e.g., Black people, women) are portrayed as leading figures have been in the media for a long time.

If indeed the historical context is responsible for these results, it is possible that conducting a similar study in the future (assuming that the disadvantaged status of deaf people will improve over time), would yield results supporting Crocker and Major's model more strongly.

Alternative models of the relationship between group identity and self-esteem

Dual identification. In a study reported by Weinberg & Steritt (1986), deaf

adolescents with dual (deaf and hearing) identification had higher self-esteem compared to those with singular identities. Students with "dual identification" endorsed items indicating that hearing status was not important (e.g., "It doesn't matter if I work around deaf or hearing people or both"), rather than indicating that both were important. More appropriately, "dual identification" may be conceptualized as the joint identifications with two independent groups: deaf and hearing. Supporting this conceptualization is the finding that minority and majority identifications were not related in a sample of Black college students (Bat-Chava & Deaux, 1990). This notion is further supported by the findings in both of the current studies that valuation of hearing and deaf attributes were unrelated to each other.

Because the focus of this study was not on dual identity, not much information is available to determine identification with the hearing majority. Valuation of hearing attributes, however, may serve as a rough estimation of such identification. Using a median split on the variables of valuing hearing and deaf attributes, respondents were classified as having high or low hearing identification, and high or low deaf identification. Analysis of variance using self-esteem as the dependent measure yielded only a significant effect for valuing hearing attributes. Thus, dual identity does not seem to yield higher self-esteem. Future research that would include data on dual identification may shed further light on this phenomenon.

Self-esteem as an independent variable. Self-esteem was conceptualized in this study as the principal consequence of other variables, both ecological and psychological. Some theorists, however, view self-esteem as a construct that develops relatively early in life and is quite stable throughout the life cycle (Coopersmith, 1967; Rosenberg, 1979; but see Harter, 1983[41]). Thus, self-esteem could be conceived as a determining factor of other behaviors and not just as their consequence.

Data from both studies suggested, for example, that comparing oneself to hearing people was associated with higher self-esteem. It is possible that a child from a hearing/oral background develops high self-esteem early in life (e.g., because of good family relationships), and as a result compares himself or herself to hearing people rather than to deaf people. The current findings do not rule out such an interpretation.

Other dependent measures. Although the relationships between self-esteem and the other variables in the study did not support the proposed model, many of the constructs were associated with each other in the predicted direction. Group identity, for example, was positively related to attitudes toward deaf people, to valuing deaf attributes, and to deafness orientation in the school. It was negatively related to fantasizing about being hearing and to valuing hearing attributes. Although these constructs did not discriminate between people with varying levels of self-esteem, they may be related to other variables not measured in the current study.

One such variable suggested by the open-ended data in Study II is that of social relationships. One of the participants in the study grew up in a completely hearing/oral environment and did not know other deaf people until she was 22 years old. And yet, at the time of the interview, 5 years later, she was very involved with other deaf individuals and organizations. When asked about this shift, she responded: "I think an important factor is that I was very frustrated; I knew that something was missing. I'm a very social person and I like being involved in an environment that involves being social". It is possible that people who grew up in an oral environment and are more sociable (extroverted) would choose to learn sign language and become a part of the deaf community. This would allow them easier access to social relationships. In contrast, many of the people who were oral in adulthood indicated that their social life was rather limited; they did not associate with any deaf people, and interactions

with hearing people were difficult. As a result, they tended to be socially isolated. This social isolation may be partly by choice in people who are more introverted and desire fewer social contacts.

Strengths and limitations of the study and directions for future research

This study is unique from a double perspective: as a study on deafness, and as a study in social psychology. First, much of the previous research on deafness is descriptive and not theoretical; the studies reported here, in contrast, were guided by social psychological theories. In addition, with very few exceptions, previous studies on deafness used children or adolescents as participants. Only one of the 22 studies reviewed earlier used an adult sample (Sussman, 1973). The current questionnaire study used the largest sample of deaf adults ever reported in the literature in a study on self-esteem, and thus adds much needed information to the meager knowledge we have about adults who are deaf. In addition, unlike most previous research that used relatively homogeneous groups of people as participants, respondents in this study were diverse in age, education, and philosophy. The use of various modes of communications to interview participants is also unusual. Many researchers did not report how they had communicated with their participants, and those who did, reported using oral communication, which was likely to introduce misunderstanding between researchers and participants.

The current study is unique from a theoretical perspective as well. Most previous research on minority groups has investigated ethnic or racial minorities. As noted earlier, deaf people are both different from and similar to ethnic minorities. They are different because most deaf children are born to hearing parents and are raised in an environment consisting exclusively of the hearing majority. They are similar to ethnic minorities, however, because many of them share a language (ASL), marry within the group, and maintain organizational networks. Although members of

ethnic minorities may choose to dissociate from their group, they will almost always have ties to other members of their group by virtue of having a minority family. Deaf people, on the other hand, may choose never to associate with other deaf individuals and groups, as was evident in this study. This relationship with the group sheds a new light on the theories on minority membership. In particular, theorists and researchers need to acknowledge the variability in the experience of different minority groups, as well as the variability within the group studied.

Some discrepancies were found between the results of the two studies; these may be explained by some methodological difficulties present in the studies. Several of the scales created in study II through coding of open-ended interviews had rather low internal reliability (valuation of deaf attributes, oral ability, and physical self-esteem). In addition, some of the constructs that were used in study I could not be extracted from the interviews in Study II because of difficulty in communicating with respondents with low English skills. Thus, attributions of failure and ingroup comparisons were not measured in the second study. In addition, the smaller sample size of the interview study did not allow the detection of small effects present in the questionnaire study (i.e., the moderation effects). Further, the operationalization of some of the constructs were different between the two studies. Self-esteem, for example, was conceptualized as general self-esteem in the first study, but as a combination of domain-specific self-esteems in the second study. This is reflected by the moderate correlations of self-esteem between the two studies. Although the correlations are significant, their magnitude indicates that the self-esteem measures in the two studies may have tapped somewhat different psychological constructs. Taken together, these methodological problems may explain the inconsistencies between the

two studies.

This study attempted to test a causal model outlining the relationships between experiences that occurred in childhood and those occurring in adulthood. The cross-sectional nature of the study, however, did not allow an unequivocal test of the model for several reasons. First, a cross-sectional study cannot determine the direction of the hypothesized causal relationships. As noted earlier, although self-esteem was conceptualized here as the outcome of various ecological and psychological variables, it is possible that preexisting levels of self-esteem determined other psychological processes, such as ingroup comparisons or the valuing of deaf and hearing attributes. Moreover, the effect of later events and attitudes on earlier memories have been amply documented (Fischhoff, 1982; Greenwald, 1980). The childhood experiences reported by participants in this study were probably colored to some extent by later experiences.

A longitudinal study could overcome these difficulties. Such a study could examine, for example, the levels of self-esteem and other variables both earlier (e.g., during adolescence) and later in life (in adulthood) to determine the direction of the hypothesized relationships. Studying these experiences at a time closer to their occurrence would also ensure a higher accuracy of the measured constructs.

Another study could address the possible relationships between the *zeitgeist* and levels of ethnocentrism among deaf individuals. The current time is particularly ripe for such an investigation. Deaf people are gaining more visibility, demonstrated by the recent publication of various books about deafness (e.g., Kisor, 1990; Padden & Humphries, 1988; Sacks, 1989), and the portrayal of deaf people in other media, especially television. Concurrently, some legislative changes have been recently made that improve the social and educational position of deaf people in this country. In

1988, the Commission on Education of the Deaf (COED) presented to the Congress and the President its report, *Toward equality*. A second report, commenting on the implementation of the COED's 52 recommendations, was published recently (Bowe, 1991), noting that about half the recommendations have been at least partly implemented. Further, in 1991. President Bush signed into law the American with Disabilities Act. One of the sections of this law concerns the establishment of telephone relay service all over the United States. This service makes communication over the telephone accessible for every deaf person.

If this trend is to continue, deaf people will gain more rights and more visibility over the next several years. Such indices of social change could be related to the levels of ethnocentrism exhibited by deaf people, measured repeatedly over a period of several years. It is hypothesized that with the increase in the social status of deaf people their levels of ethnocentrism will increase as well.

In conclusion, the relationship between group identity and self-esteem in deaf adults is not a simple one. Group identity moderated the relationship between deafness orientation and self-esteem, and in turn its relationship with self-esteem was moderated by ingroup comparisons and the importance accorded to clear speech. This complex relationship explains why a simple comparison of those with high and low group identity failed to show an effect on self-esteem. These results underscore the importance of studying "real", rather than laboratory-constructed groups, in a field setting, and with attention to ecological, in addition to psychological, variables.

Notes

1 In 1939, when Clark and Clark conducted their original study, dolls of colors other than white were not commonplace. It is possible that the children judged these dolls as ugly because the dolls were unfamiliar objects (I owe this point to my student Anthony Gioia). Interpretation of these studies' results are thus even more uncertain than originally formulated.

2 Although Crocker and Major (1989) conceptualize the last two processes as one, I believe that they are two distinct processes.

3 The Self-Evaluation Maintenance (SEM) model (Tesser & Campbell, 1982) suggests that when an individual compares himself or herself to similar (and close) others who perform well on tasks relevant to the self, self-esteem may suffer. Tesser, however, formulated and tested comparisons to individual others, whereas the current model discusses comparisons to more abstract groups. In addition, because of the average poorer outcomes of the minority, comparing oneself to other minority members is not likely to be an upward comparison. There is no contradiction, therefore, between Tesser's predictions that comparisons will have a negative effect on self-esteem, and the ones suggested here that ingroup comparisons will have a positive effect on self-esteem.

4 This theory postulates that people are motivated to maintain high self-esteem and discusses the ways in which this maintenance occurs. It does not, however, address the question of what conditions affect low self-esteem.

5 Hearing loss is usually categorized into four levels: mild, moderate, severe, and profound. Profound deafness is defined as loss of 90 dB or over in the better ear. A person with profound deafness cannot comprehend speech by hearing. The most widely cited number of deaf people in this country is 2 million (e.g., Pollard & Long, 1989). Despite its wide use, this figure is not supported by current research; Brown suggests that a better estimate is 600,000 people, constituting 1/2 of a percent of the U.S. population. Stewart (1991) concurs with this estimate.

6 The word "dumb" has both the meaning of 'speechless' and 'stupid'. The Oxford English Dictionary notes that "[i]n Gothic, Old Norse, and Old English [dumb means].. 'mute, speechless'; in Old High German it shared this sense with those of 'stupid'...; in other languages and periods, generally in sense 'stupid'..." (Simpson & Weiner, 1989, p. 1114). Hodgson (1953, p. 62) attributes to Aristotle the statement "Those who are

born deaf all become senseless and incapable of reason" (quoted in Lane, 1984, footnote 88 to Chapter 5). Aristotle is believed to have equated hearing with intelligence: "Aristotle had said that, of all the senses, hearing contributes the most to intelligence and knowledge... since sound is... the vehicle of thought. This was alleged to prove... that the deaf were incapable of intellectual instruction" (Lane, 1984, pp. 91-92;). Zwiebel (1989) noted that in ancient Jewish sources deaf people were lumped together with the mentally retarded in terms of their legal rights, and could not marry or own land. Deaf people who could speak, however, unlike those who could not, had the same rights as hearing people. By implication, these Jewish sources equated speech with intelligence.

7 This view of deafness as pathological is evidenced by the surge of interest in cochlear implants (Glickman, 1986; Treesberg, 1991).

8 Contrary to previous notions, research on ASL conducted in the last two decades reveals that it is a complex language and has its own syntax and structure, like any other natural language (Stokoe, 1960, 1976; Bellugi, 1980).

9 A few years ago, when I was working in a kindergarten for deaf children in Israel, one of the teachers told me that some children believed that when they grew up they would become hearing. Being puzzled by this idea she inquired why. She found out that these children have never met a deaf adult and thus believed that deaf adults didn't exist; hence the logical conclusion that they themselves would become hearing in adulthood!

1 0 "Prelingual" deafness is defined by the age at onset of deafness. In most studies people who were either born deaf or became deaf before the age of three (i.e., before development of oral language) are considered prelingually deaf.

1 1 Five respondents completed the questionnaire more than once because they were recruited through more than one organization. For each of them, only the first questionnaire was considered.

1 2 This constitutes a ratio of 1:1.28 males to females. Schein and Delk (1974) report a ratio of 1:1.05 males to females in a national survey of the deaf in the United States.

1 3 These percentages are very similar to the ones reported by Schein and Delk (1974). In their national sample 91.7% of the participants had hearing parents, 3.2 had deaf parents, .8% had one deaf parent, and the parental hearing status of 4.3% was

unknown.

14 Although this is a relatively low reliability coefficient, further analysis indicates that removing any one of the three items would not result in higher reliability coefficient. Moreover, correlations were calculated between the three items of this scale and the other scales described above. All three items correlate with the other four scales in the same direction and the same magnitude. Thus, it was decided to treat these three items as a scale.

15 This procedure was suggested by David M. Rindskopf (personal communication).

16 The regression equation that predicts self-esteem from school deafness orientation, group identity, and the interaction between them has the general form of:
$Y = B_1X_1 + B_2X_2 + B_3X_1X_2 + A$
where Y is the predicted self-esteem score, X_1 is school deafness orientation, and X_2 is group identity. This equation can also be written as:

$$Y = (B_1 + B_3X_2)X_1 + (B_2X_2 + A).$$

This last equation can be viewed as a family of equations of regression lines whose slope is $B_1 + B_2X_2$ and whose intercept is $B_2X_2 + A$. To depict this family of equations graphically, X_1 and X_2 were each assigned 3 values: "low" (one standard deviation below the mean), "average" (mean score), and "high" (one standard deviation above the mean; Cohen, 1983). This resulted in 9 points, indicating the three lines in figure 5a.

17 This expression is adapted from an interview with one of the participants who represents this cluster and who described himself as a "hearing-deaf man".

18 The total N = 230; cases with missing data were dropped from the analysis.

19 Calculated as the weighted mean of means.

20 The 92 participants who volunteered to be interviewed but did not meet the eligibility criteria for the second phase were sent postcards thanking them for having completed the questionnaires. They were also told that they would not be contacted again since selection to be interviewed was done on a random basis, and they were not selected. Fourteen of the 86 eligible volunteers were not contacted: 4 did not provide a telephone number, and 3 people were judged to have insufficient communication skills. These participants attended the communication skills class at the New York Society for the Deaf, because they needed help in developing communication skills to be able to communicate both with hearing and deaf people. They have all emigrated recently to the United States. Other 7 volunteers were not contacted because of changes made midway

through the study in eligibility criteria. Initially only subjects 35 years or younger were contacted. Once it was evident that not enough participants could be recruited to be interviewed in this age range, older participants were contacted as well (up to age 42). However, several months had passed since the early respondents completed their questionnaires and they had already been thanked for their participation and notified that they would not be contacted further. Therefore, these 7 volunteers were not contacted again. Eight participants who did not meet the eligibility criteria were nonetheless contacted: 3 who indicated that they could hear speech without a hearing aid, 2 of whom were from deaf families; 4 who had missing information on one of the three criterion variables; and one person who became deaf at the age of 4.

21 Up to 10 call-backs were attempted in reaching potential interviewees when no one answered the phone. If there was a response and the telephone number was correct, up to five call-backs were attempted in order to schedule an interview.

22 Quality of information was judged poor when respondents did not understand the majority of questions (five respondents), when the researcher did not understand the interviewee (one person), or when the respondent was not willing to answer questions (one respondent). It is sobering to note that of the five people whose communication skills did not enable them to understand the questions asked, four were Black and one was Hispanic. All five were women. In addition, the audio cassette on which one interview was recorded was lost, and one recording was of extremely poor quality, making it impossible to transcribe the interview.

23 When the voice of the respondent was judged to be of poor quality, the interviewer repeated all oral communication to insure an acceptable quality of voice for the tape-recording.

24 Five different interpreters assisted in conducting these interviews.

25 Ten of these 29 interviews were conducted in oral English, therefore no interpreter was needed. The 19 interviews without an interpreter were conducted in ASL or Total Communication by the researcher herself, who is quite fluent in ASL. Presence of interpreters was dictated to a large extent by monetary and scheduling considerations.

26 A subscale of ingroup comparisons was not created. Respondents were asked whether they compared themselves to other deaf people or to hearing people educationally and economically. These two items did not correlate with each other, $r =$

.01, and thus no scale could be created. In addition, many respondents had difficulty answering this question, resulting in a high rate of missing data. It was decided, therefore, not to use these data in subsequent analyses.

Two questions addressed the issue of attribution of failure. Respondents were asked who they thought was responsible for the lower education level and economic status of deaf people. Responses were ordered along a hearing-deaf continuum. For education: the use of sign language (representing a systemic rather than personal responsibility), deaf people, deafness itself, hearing persons, and hearing systems (e.g., the government). For economic status: deaf people, deafness or lower education, hearing persons, and hearing systems. The reliability of this 2-item scale was rather low (alpha = .40), and thus the scale was not retained for subsequent analyses.

27 One interview was coded by one coder.

28 Many of the scales described below included mode of communication used or preferred. Different settings require different communication modes. Professional sign language interpreters, for example, are sometimes used at school or work, but not at home. Nonetheless, to maintain uniformity across the different scales all communication modes were combined into one scale, ordered along a deafness-hearing orientation.

29 Gallaudet University is the single liberal arts institution that serves only deaf students in the world (although it accepts hearing students for more advanced degrees). In March of 1988 the Board of Trustees of the University, composed mainly of hearing people and headed by a hearing woman, elected a hearing person, Dr. Elizabeth Zinser, as the president of the college. Dr. Zinser was one of three finalists for the position; the two others were deaf. When the announcement was made about the decision, the students went on strike, calling their protest "Deaf President Now". They closed down the school and demanded that Dr. Zinser resign and that one of the two deaf finalists be nominated president. They also demanded that the chair of the board resign, that the constitution of the board be changed to at least 51% deaf (over time), and that no repercussions be carried out against the striking students. After a week of protest by students with support of the faculty, extensive media coverage, and intervention from Congress, which threatened to reduce funding to the University if a deaf president was not nominated, all demands were accepted. Dr. I. King Jordan, who was previously the dean of Gallaudet University College of Arts and Sciences, was nominated president of Gallaudet university, the first deaf president in the college's 124 years history (Gannon, 1989).

30 These scores are spuriously high as they do not include those 9 respondents who are dependent on their parents.

31 In commenting about this item, one of the participants suggested that it should not have been deleted. She indicted that some deaf people find that "partial deafness" is a concept that applies to them and to other people. In retrospect I feel that this item should not have been removed.

32 Two additional items had very low correlations with all other items, and were not included in the subscales.

33 Data was missing for one respondent who was, therefore, dropped from this analysis.

34 A pseudonym. Identifying information has been altered so that respondents would not be identified.

35 NTID is one of the colleges of Rochester Institute of Technology (RIT) in Rochester, New York. Students at NTID can take courses either in a completely deaf classes or can be integrated in reguiar classes with support services, such as sign language interpreters and note-takers. In this environment students can choose to be integrated in the hearing college to various degrees.

36 Gallaudet University is the only liberal arts university for deaf people in the world, in which teaching is done mostly through total communication. The university admits only deaf students for its undergraduate degrees, although hearing students enroll in graduate programs.

37 The Americans with Disabilities Act (ADA) of 1990 mandated that each state establish a telephone relay service to enable people who use TTYs and those who do not to contact each other through a third party. Such services enable a deaf person to contact hearing people and institutions (e.g., make an appointment with a physician, order pizza), and vice versa.

38 Deaf people refer to themselves and to others by name-signs, signs designated to each person. Often these signs incorporate the person's initials or distinguishing features (e.g., long hair). Other times, as in this case, a particular behavior is referred to by the name-sign.

39 My own assessment is that he overestimates the clarity of his speech.

40 The higher percentage in Study II is due, in part, to the higher percent of acquaintances recruited into the study (who belonged to the Deaf Power cluster) compared to Study I.

41 Harter (1983), however, states that self-esteem seems to drop in times of transition; for example, from elementary school to junior high school. She does not address the question whether after stabilization of the new situation self-esteem returns to its original level.

APPENDIX A

Table 1.
Studies of Self-Esteem among Deaf People

Study	Sample(s)	Self-esteem Measure	Source of Information	Comments
Barsky, 1987	274 deaf children, mean age 9 yrs 8 mos	Kinetic Family Drawing; size of self used as dependent measure	Tables 15, 16, 17, pp. 46, 48	Unpublished dissertation
Blanton & Nunnaly, 1964	1) 173 deaf children & adolescents (residential schools); 2) 178 hearing	Semantic differential (written)	n.a.	Published article; effect sizes could not be calculated--not enough information provided
Brunschwig, 1936 Study I	1) 159 deaf, mean age 15 (residential schools) 2) 243 hearing, mean age 13 (public school)	Rogers Test of Personality Adjustment (modified; written); total score used	Tables 3, 5, 6, pp. 37, 39, 40	Published book; instructions to deaf Ss given in writing; Ss who did not understand items excluded from study

Table 1 (continued)

Study	Sample(s)	Self-esteem Measure	Source of Information	Comments
Brunschwig, 1936 Study II	1) 183 deaf, mean age 16 (local residential schools) 2) "supplemental" national sample, 1330 deaf (mean age not reported) 3) 346 hearing, mean age 13	Personality Inventory for Deaf Children, specially developed--written with sign illustrations; General Adjustment score used	Tables 28 29, 30, pp. 86, 88	Published book
Casey, 1981	72 mainstreamed deaf students, ages 6-20	Coopersmith Self-esteem Inventory (written)	Table 14, p. 80	Unpublished dissertation; questions presented in mode of communication preferred by S
Cowan, 1981	174 students, deaf school, ages 14-16	Piers-Harris Self-Concept Scale for Children[1]	p. 127	Unpublished dissertation; items were read and signed
Craig, 1965	1) 16 deaf residential 2) 16 deaf day 3) 16 hearing ages 9-13	Illustrated sociometric test	n.a.	Published article; effect sizes could not be calculated--not enough information provided

Table 1 (continued)

Study	Sample(s)	Self-esteem Measure	Source of Information	Comments
Ferraro, 1983	1) 31 day school 2) 31 residential school ages 6-20, mean age 14 yrs 6 mos Ss matched	Meadow's Self-Image Inventory (SII), cartoon-like with sign illustrations	Table 4, p. 31 correlation matrix in appendix; means & stds in appendix	Unpublished dissertation; test administered in writing & ASL
Garrison, Tesch & DeCaro, 1978	109 deaf NTID[2] students	Tennessee Self-Concept Scale (TSCS); written	Table 1, p. 970	Published article; signed clarification given upon request
Gray, 1980	1) 13 oral communication 2) 13 manual communication 7-14 yr olds, mean age 9 yrs 4 mos	Meadow's SII	Table 5, p. 74	Unpublished dissertation; Ss tested by mode of communication used in class
Green, 1978	1) 28 deaf residential 2) 16 day deaf 3) 23 partial mainstreaming ages 12-18	Piers-Harris (adapted); total score used	Table 2, p. 49	Unpublished dissertation; measure interpreted into sign
Larsen, 1984	1) 49 students partial mainstreaming 2) 51 not mainstreamed	Primary Self-Concept Inventory (illustrated); total score used	Table 9, p. 63	Unpublished dissertation; instructions given in sign on a video-tape

Table 1 (continued)

Study	Self-esteem Sample(s)	Source of Measure	Information	Comments
Marcus, 1985	97 Gallaudet students ages 17-35, mean age 22	TSCS	Tables 1, 2, 4	Unpublished masters thesis; test administered in ASL on a video tape
McMahon, 1985	135 elementary school students, ages 9-11, mean age 10 (3 types of schools)	Meadow's SII	Tables 4.3.18, 4.3.25, 4.3.26b, pp. 241, 290 293	Unpublished dissertation
Ndurumo, 1980	1) 36 residential students, grades 8-12 2) 25 mainstreamed students, grades 9-12	TSCS, total score	Tables 13, 15, 17,18, 19, 20, 21, pp. 70, 73, 77, 78, 79, 80	Unpublished dissertation; test administered in writing; Ss prejudged to be deficient in English were excluded
Sarfaty & Katz, 1978	1) 21 deaf school students 2) 13 self-contained deaf class 3) 14 mainstreamed ages 14-15	TSCS; Dependent measure used: "harmony score" derived by an unspecified "special formula"	Table 1, p. 440	Published article

Table 1 (continued)

Study	Self-esteem Sample(s)	Source of Measure	Information	Comments
Schlesinger & Meadow, 1972	1) 58 dD[3] residential 2) 58 dH residential 3) 74 dH day students	Meadow's SII	Tables 18, 19, pp. 134, 137	Published book[4]
Sussman, 1973	129 adults, ages 21-50	TSCS, total score	Tables 1, 5, 6, 7, 9 10, 11 pp. 89, 105, 106 108, 112 113, 115	Unpublished dissertation; clarification given in sign upon request
Warren, 1983[5]	58 deaf public school students	Picture Game	Table 6, p. 53	
Weinberg & Steritt, 1986	111 residential high school students; mean age 17	Self-evaluation (specially developed; written)	p. 100	Published article; instructions given in total communication; written measure was interpreted to sign for 8 Ss who requested

Table 1 (continued)

Study	Self-esteem Sample(s)	Source of Measure	Information	Comments
Wright, 1981	1) 69 day deaf students 2) 857 hearing	Piers-Harris (written)	n.a.	Unpublished dissertation--not enough information provided to calculate effect size
Yachnik, 1985[6]	1) 28 dD 2) 28 dH college students, mean age 20	Self-Description Questionnaire, III, (written); "overall" score used	pp. 94-95	Unpublished dissertation; assumed understanding of test items based on a pilot study

Notes.

1. Other self-esteem measures were presented. The Piers-Harris total score was used in this analysis because it has been used in other studies with deaf respondents.
2. National Technical Institute for the Deaf, a part of Rochester Institute of Technology.
3. dH are deaf children of hearing parents; dD--deaf children of deaf parents.
4. Part of the study reported here was previously published as an article, Meadow (1969).
5. Part of this unpublished dissertation was later published (Warren & Hasenstab, 1986). The unpublished study is used here as it provided more information.
6. Part of this unpublished dissertation was later published (Yachnik, 1986). The unpublished study is used here as it provided more detailed information.

APPENDIX B
Recruitment of participants

Respondents were contacted through the following sources:

1. A.G. Bell Association for the Deaf, New York State Chapter, an organization advocating oral communication. Prospective subjects were identified by the chapter president and questionnaires were mailed to them by her. Twenty nine questionnaires were mailed and 18 completed questionnaires were mailed back to the researcher; a return rate of 62%.

2. Coalition of Deaf Educators (C.O.D.E.), a social/political organization of deaf educators. Seventeen questionnaires were handed out during a meeting, and 15 were returned either immediately or later through the mail; a return rate of 88%.

3. Fairlawn Deaf Program, an agency in Fairlawn, New Jersey that serves deaf clients by teaching job skills, making job referrals, and providing interpreters for job interviews. One hundred and thirteen questionnaires were mailed to a list of clients identified by the program coordinators as being 18 - 35 years of age and without multiple handicaps. Thirty five completed questionnaires were returned through the mail; a return rate of 30%.

4. Lehman College, an evening Graduate Equivalency Diploma (GED) preparation class. Twenty two questionnaires were distributed, completed, and collected during class. The questionnaire was read to the class by the researcher and interpreted into ASL by a sign language interpreter. Return rate was 100%.

5. Lehman College, summer classes for deaf students. Eight questionnaires were distributed, completed, and collected during classes. The researcher and a sign language interpreter assisted in completing the questionnaires when respondents requested such assistance. Return rate was 100%.

6. New York City Civic Association of the Deaf (NYCCAD), a social/political organization of deaf people. Twenty seven questionnaires were handed out during a monthly meeting, and 15 questionnaires were returned either immediately or later through the mail; a response rate of 56%.

7. New York League for the Hard of Hearing, an organization serving hard of hearing and deaf people, providing classes, hearing tests, hearing aids, and other services. Prospective participants were identified by the director of research at the League, and

23 questionnaires were mailed to them by the researcher. Eleven completed questionnaires were mailed back to the researcher; a return rate of 48%.

8. New York Society for the Deaf (NYSD), Job Skills Class. Ten questionnaires were distributed, 6 of them were completed and collected during class. The questionnaire was read to the class by the researcher and interpreted into ASL by a sign language interpreter (Response rate 60%.)

9. NYSD, Communication Skills Class. Five questionnaires were distributed, completed, and collected during class. The researcher and the class teacher assisted in completing the questionnaires. Return rate of 100%.

10. TTY[1] directory. All people listed in the directory in the 212, 718, and 914 area codes were sent questionnaires through the mail. Three hundred eighty six questionnaires were mailed, and 126 were returned, a return rate of 33%.

11. Personal contacts. To complete the sample, 6 people were approached and asked to fill-out the questionnaire. Return rate was 100%.

Note. The acronym TTY stands for "teletypewriter". This machine looks like a typewriter with a small electronic screen and a coupler for the telephone receiver, and it operates similarly to a computer modem. It enables deaf people to contact other TTY users via telephone. Another term for this instrument is TDD, which stands for "Telecommunication Device for the Deaf". Since deaf people prefer to use the term TTY rather than TDD, this will be the term used here as well.

APPENDIX C

Survey Questionnaire

1. Were you born deaf? YES NO
   If not, at what age did you become deaf? _____

2. How old are you now? _____

3. Are you a man or a woman? MAN WOMAN

4. Are (were) your parents deaf or hearing? DEAF HEARING

5. When you were growing up, were there other deaf people in your family who lived with you (not including your parents?) YES NO
   If yes, Who were they? _____

6. What mode of communication did you use most at home when you were growing up?
   SIGN ORAL OTHER, which? _____

7. From first grade to 12 grade, what school(s) did you attend?

	residential school	day deaf school	public/mainstreaming
number of years			
What mode of communication did they use most in classes at that school? SIGN; ORAL; CTHER; which?			
What mode of communication did they use most with other children at that school? SIGN; ORAL; OTHER; which?			

8a. How many friends do you have? _____ 8b. How many are deaf? _____

9. Do you feel that you are a part of the deaf community?

VERY MUCH A LITTLE NOT AT ALL

How much do you agree with each of the following sentences?

10.	Deaf people are just as smart as hearing people.	AGREE STRONGLY	AGREE	DISAGREE	DISAGREE STRONGLY
11.	Deaf people are more easily upset than hearing people.	AGREE STRONGLY	AGREE	DISAGREE	DISAGREE STRONGLY
12.	Deaf people are as happy ass hearing people.	AGREE STRONGLY	AGREE	DISAGREE	DISAGREE STRONGLY
13.	I take a positive attitude toward myself.	AGREE STRONGLY	AGREE	DISAGREE	DISAGREE STRONGLY
14.	On the whole, I am satisfied with myself.	AGREE STRONGLY	AGREE	DISAGREE	DISAGREE STRONGLY
15.	Sometimes I think I am no good at all.	AGREE STRONGLY	AGREE	DISAGREE	DISAGREE STRONGLY

16. Think about your education, and how much money you make. Who do you compare yourself to?

MOSTLY DEAF PEOPLE | SOMETIMES DEAF and SOMETIMES HEARING | MOSTLY HEARING PEOPLE

17. There are some things that **deaf** people can do and hearing people cannot. For example, most deaf people can sign better than hearing people. How important do you think signing skills are?

VERY IMPORTANT | SOMEWHAT IMPORTANT | NOT VERY IMPORTANT | NOT IMPORTANT AT ALL

18. There are some things that **hearing** people can do and deaf people cannot. For example, most hearing people have better spoken language skills than deaf people. How important do you think spoken language skills are?

VERY IMPORTANT | SOMEWHAT IMPORTANT | NOT VERY IMPORTANT | NOT IMPORTANT AT ALL

19. In this country some deaf people have less education and make less money than some hearing people. Who do you think is responsible for that?

MOSTLY DEAF PEOPLE	SOMETIMES DEAF and SOMETIMES HEARING	MOSTLY HEARING PEOPLE

20. Can you hear speech without a hearing aid? YES NO

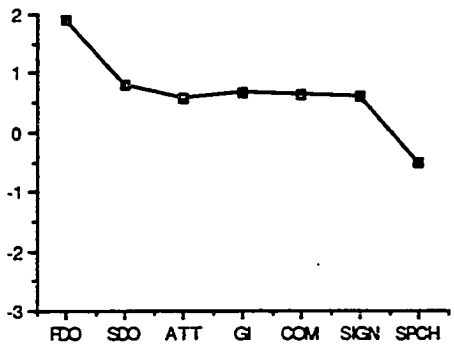
21. Can you hear speech with a hearing aid? YES NO

THANK YOU VERY MUCH FOR YOUR PARTICIPATION!

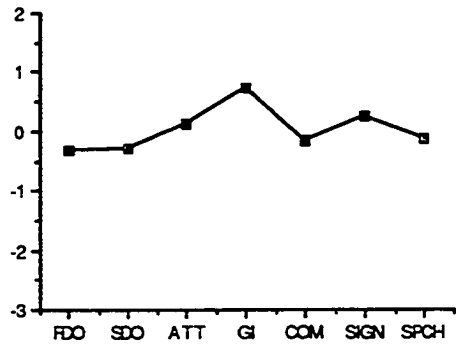
APPENDIX D

Five clusters, Study I

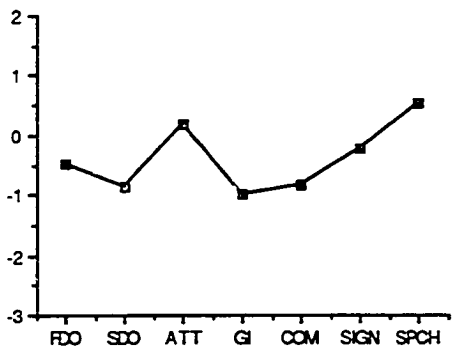
Cluster 1: Deaf Power



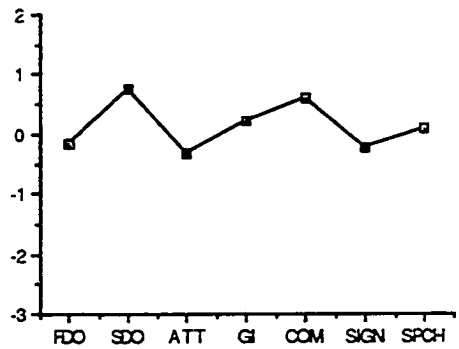
Cluster 2: Hearing Background/Current Deaf



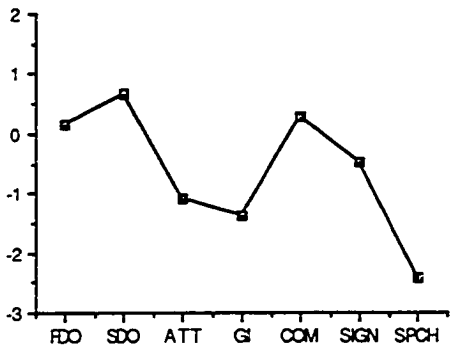
Cluster 3: Hearing Deaf People



Cluster 4: Deaf Background, Average



Cluster 5: Negatives



Legend:
FDO: Family Deafness Orientation
SDO: School Deafness Orientation
ATT: Attitudes toward the Deaf
GI: Group Identity
COM: Ingroup Comparisons
SIGN: Importance of Sign
SPCH: Importance of Speech

APPENDIX E

Consent Form

This study is conducted by Yael Bat-Chava, a doctoral candidate at the Social-Personality Psychology Program of the Graduate Center, City University of New York.

This study is concerned with the early educational and family experiences of deaf people (especially modes of communication), their self-esteem, and their contacts with and feelings towards other deaf people.

You will be asked to participate in an individual interview conducted by Ms. Bat-Chava, and interpreted by a sign language interpreter (when necessary). During the interview you will be asked questions about the above issues.

I have read the above description of the study and have had the opportunity to discuss my participation with the researcher, Yael Bat-Chava

I understand that I may withdraw from the study at any time without explanation and without consequences to me.

I understand that my name will not appear on any of the study's materials.

I have had a chance to ask questions about this research. I believe that I am aware of the nature and extent of my participation in the study, and I agree to participate.

NAME: _____

HOME ADDRESS: _____

_____

AGE: _____

SIGNATURE: _____

APPENDIX F
Scoring Key for Interview Questions

1. Mode of communication (in all questions):
   - 1: body language
   - 2: another spoken language
   - 3: oral English
   - 4: written notes
   - 5: fingerspelling
   - 6: home signs
   - 7: signed English
   - 8: lay interpreters
   - 9: professional interpreters
   - 10: total communication/PSE
   - 11: another sign language
   - 12: ASL

2. Hearing status of parents:
   - 0: hearing
   - 1: hard of hearing or mixed--deaf and hearing
   - 2: deaf

3. Deafness orientation of the workplace:
   - 0: a hearing agency with no other deaf
   - 1: a hearing agency with a few other deaf people
   - 2: a deaf department within a hearing agency
   - 3: a deaf agency

4. Frequency of seeing other deaf people at work:
   - 0: never
   - 1: once/month
   - 2: few times/month
   - 3: 2-3 times/week
   - 4: everyday

5. Preference for having a child who is:
   0: hearing
   1: "doesn't matter"
   2: deaf

6. Frequency of spending leisure time with deaf friends
   0: never
   1: once/year
   2: few times/year
   3: once/month
   4: weekends
   5: 2-3 times/week
   6: every day

7. Desire to join a hypothetical "deaf nation":
   0: no
   1: would go there on vacation
   2: would join

8. Agreement with the Gallaudet protest:
   1: disagree
   2: neutral
   3: agree
   4: wanted to participant but did not
   5: participated in it

9. "Deaf people are a minority group" and "deaf people are discriminated against":
   0: no
   1: yes

10. Feeling of common identity with other deaf people:
   0: no
   1: with some
   2: yes

11. Fantasy.
    a. wish to be hearing:
        0: never wished
        1: wished in the past but does not any more
        2: wishes to be hearing now
    b. would consider becoming hearing if a "cure" became available:
        0: would not
        1: would take a pill
        2: would undergo an operation
        3: has considered getting a cochlear implant
    c. would pay money for such a procedure?
        0: no
        1: some money
        2: pay anything could afford
        3: would borrow money to pay

12. Self-description:
    0: "hearing impaired"
    1: "hard of hearing" (or "doesn't matter")
    2: "deaf"

13. Comparisons:
    0: to hearing
    1: to both
    2: to deaf

14. Attribution of responsibility to poorer outcomes
    a. For education
        1: sign language (representing a systemic responsibility)
        2: deaf people
        3: deafness itself
        4: hearing persons (e.g., parents, teachers)
        5: hearing systems (e.g., the government)
    b. For economic status:
        1: deaf people
        2: deafness itself, or lower education
        3: hearing persons
        4: hearing systems

15. Hearing ability (asked separately with and without hearing aids):
    0: Can you hear loud noises?
    1: Can you usually tell one kind of noise from another?
    2: Can you usually tell the sound of speech from other sounds and noises?
    3: Can you usually hear and understand what a person says without seeing his/her face if s/he shouts across a quiet room?
    4: Can you usually hear and understand what a person says without seeing his/her face if s/he talks in a normal voice across a quiet room?
    5: Can you usually hear and understand what a person says without seeing his/her face if s/he whispers across a quiet room?

16. Socioeconomic status (Hollingshead, 1975):
    a. ecucational level
        1: less than seventh grade
        2: junior high school (9th grade)
        3: partial high school (10th or 11th grade)
        4: high school graduate (whether private, preparatory, parochial, trade, or public school)
        5: partial college (at least one year) or specialized training
        6: standard college or university graduation
        7: graduate professional training (graduate degree)
    b. occupational level
        1: farm laborers/menial service workers
        2: unskilled workers
        3: machine operators and semiskilled workers
        4: smaller business owners, skilled manual workers, craftsmen, and tenant farmers
        5: clerical and sales workers, small farm and business owners
        6: technicians, semiprofessionals, small business owners
        7: smallers business owners, farm owners, managers, minor professionals
        8: administrators, lesser professionals, proprietors of medium-sized businesses
        9: higher executives, proprietors of large businesses, and major professionals

    SES = [3 X educational level] + [5 X occupational level]

APPENDIX H

Attitudes Toward Deaf People

Answers are indicated on a 5-point scale, from "strongly disagree" to "strongly agree".

1. Deaf people are just as intelligent as other people
2. Deaf people often feel sorry for themselves
3. Deaf people are more easily upset than other people
4. Deaf people are often angry
5. Deaf people tend to keep to themselves much of the time
6. Deaf people worry a great deal
7. Deaf people are as happy as other people
8. Deaf people are ususally easier to get along with than hearing people
9. Deaf people feel that they are not as good as other people
10. Totally deaf people are no harder to get along with than those with partial deafness
11. You should not expect too much from a deaf person
12. Deaf people cannot have a normal social life
13. It is almost impossible for a deaf person to lead a normal life
14. The parents of deaf children should be less strict than other parents
15. Deaf people are the same as everybody else
16. Deaf people should not be expected to meet the same standards as everyone else
*17. Deaf people try to hide their deafness
*18. Deaf people find it harder to make friends than other people
*19. Deaf people are most likely to feel depressed than other people
*20. Deaf people are more likely to feel lonely than other people

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Note. Items indicated by an asterisk (*) are from Furnham & Lane (1984).

APPENDIX I
Collective Self-Esteem Scale

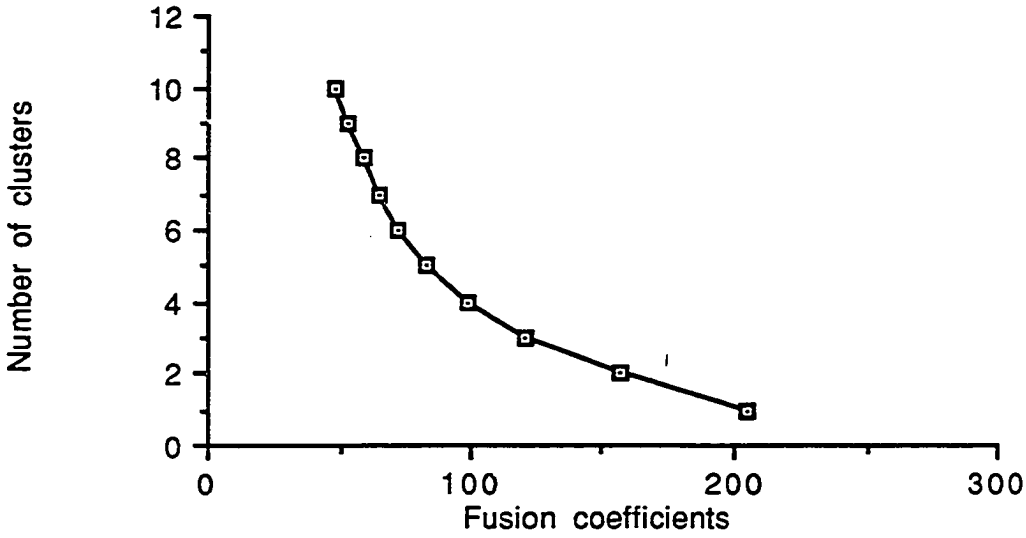
We are all members of different social groups or social categories. Some of such social groups or categories are about gender, race, nationality, ethnicity, and socioeconomic class. We would like you to consider your membership in the deaf community, and respond to the following statements on the basis of how you feel about deaf people or yourself as a deaf person. There are no right or wrong answers to any of these statements; we are interested in your honest reactions and opinions. Please read each statement carefully and respond by using the following scale:

Answers are indicated on a 5-point scale, from "strongly disagree" to "strongly agree".

1. I often regret/feel sorry that I am deaf.
2. Overall, hearing people generally feel positive toward/good about deaf people.
3. Overall, being deaf has very little to do with how I feel about myself.
4. In general, I'm glad I'm deaf.
5. Most people consider deaf persons, on the average, to be less desirable/good than hearing people.
6. Being deaf is an important reflection of who I am.
7. I often feel that deaf people are not worthwhile/as good as hearing people.
8. In general, hearing people respect deaf persons.
9. Being deaf is not important to my sense of what kind of person I am.
10. I feel good about deaf people.
11. In general, hearing people think deaf people are unworthy/not as good as they are.
12. Being deaf is an important part of my self-image.

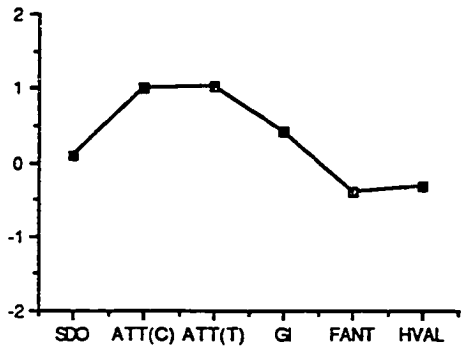
APPENDIX J

"Scree" Plot of Cluster Fusion Coefficients (Study II)

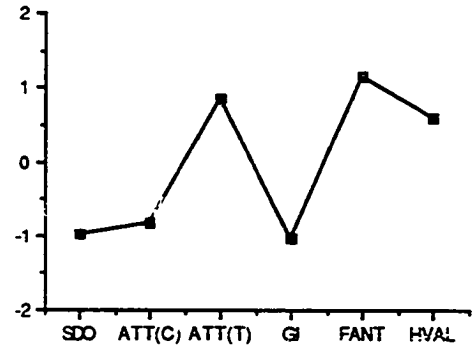


APPENDIX K
Five Clusters, Study II

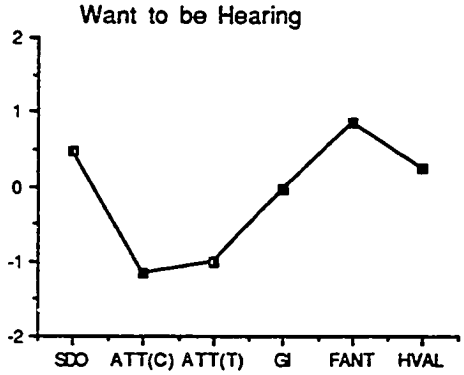
Cluster 1: Positive Deaf



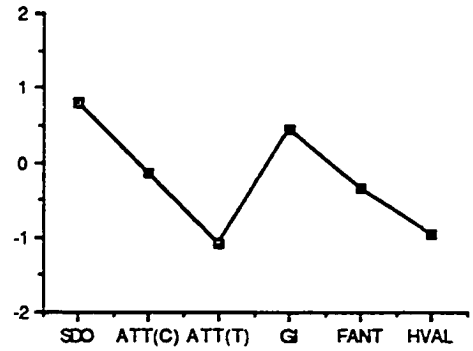
Cluster 2: Hearing Deaf People



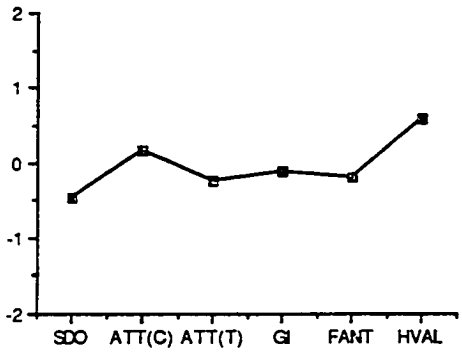
Cluster 3: Deaf Background/
Want to be Hearing



Cluster 4: Deaf Background, Mixed



Cluster 5: Averages



Legend:
SDO: School Deafness Orientation
ATT(C): Attitudes (Characteristics)
ATT(T): Attitudes (Treatment)
GI: Group Identity
FANT: Fantasy
HVAL: Valuing hearing attributes

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