

Trait Attributions About College Students With a Physical Disability: Circumplex Analyses and Methodological Issues¹

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Trait attributions concerning able-bodied college students and those with a physical disability were investigated in two studies. In Study 1, 194 able-bodied students completed extensive adjective checklists in one of four experimental conditions: stimulus person physically disabled (wheelchair user) male, disabled female, able-bodied male, or able-bodied female college student. To avoid self-presentation biases, subjects completed checklists not in terms of their own views but in terms of commonly held stereotypes. Results showed that not only were fewer socially desirable and more undesirable traits attributed to students with a disability than to able-bodied students, but when tested for "sameness" vs. "oppositeness" using two circumplex models, traits attributed to students who have a disability were clearly the "opposite" of those attributed to able-bodied students. In Study 2, 115 students completed a trait checklist based on the findings of Study 1 with reference to one of the four stimulus persons. Although subjects reported their own views, the results were consistent with those of Study 1. It was also found that stereotyping in the socially desirable direction was related to stereotyping in the undesirable direction; both were related to lack of ease with students with a disability. Common stereotypes of wheelchair user students are listed and the implications of the findings for the design of programs to reduce prejudice and integrate students with a disability into academic life are discussed.

Numerous studies have demonstrated that able-bodied people hold negative attitudes toward physically disabled persons (e.g., Jackman, 1983; Yunker & Block, 1979). Contact with disabled people is often avoided (Eberly, Eberly, & Wright, 1981), and there is evidence that this avoidance is partly motivated by anxiety (Fichten, in press; Fichten & Bourdon, in press; Snyder, Kleck, Strenta, & Mentzer, 1979).

While attitudes toward disabled people have been heavily researched, few investigations have actually attempted to empirically demonstrate the nature of the stereotypes of physically disabled people held by able-bodied persons. Yet, knowing the content of stereotypes is of considerable interest because

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these can have behavioral consequences for both the able-bodied and the disabled person. For instance, in a study of physically disabled adults, Beail (1983) reported that even though disabled people rejected most "popular beliefs about the handicapped," their behavior was heavily influenced by such beliefs and actually became consistent with them. Beail concluded that "the stereotype has a powerful influence in that it provides a defined frame within which the stigmatized can move" (p. 57). Knowledge of the content of stereotypes can also be important in designing programs to change attitudes and reduce prejudice. Stereotypes can consist of both positively and of negatively valued traits. Knowledge of the relationship between positive stereotyping and ease with disabled people is needed to plan which images should be reinforced and which eliminated in attitude change programs.

Because of increasing awareness of physically disabled people (Fichten, Hines, & Amsel, 1985), especially wheelchair users, institutions of higher education are rapidly becoming more accessible to them. Colleges and universities provide ample opportunities for contact, as equals, between physically disabled and able-bodied students. As equal status contact provides a ready-made vehicle for changing attitudes (e.g., Anthony, 1972; Rowlett, 1982; Yaker & Block, 1979), attitude change programs geared specifically to combat damaging stereotypes and attitudes which hamper interaction could easily be mounted. Unfortunately, we know little about either the content or the impact of stereotypes concerning wheelchair user college students; even attitudes of able-bodied students toward their disabled peers have been infrequently studied (cf. Stovall & Sedlacek, 1983).

While numerous studies compare evaluations and stereotypes of disabled and of able-bodied people, none of these focus on the *content* of the stereotypes. In most such studies, subjects are presented with a brief list of characteristics and are asked to indicate those they believe to be true of a group or a group member. While such studies have clarified the mechanisms and motives which underlie such evaluations (e.g., Gibbons, Stephan, Stephenson, & Petty, 1980; Katz & Glass, 1979), they fail to provide a picture of the popular beliefs concerning people with specific disabilities.

The goal of the present investigation was to provide a comprehensive description of the content of common stereotypes of wheelchair user college students, to show how these differ from stereotypes of able-bodied students, and to examine traits attributed to male and female students, both with and without a physical disability. Because perceived similarity is closely linked to liking for most groups of people (cf. Byrne, 1969), the similarity of traits attributed to physically disabled and to able-bodied students was also assessed through the use of two different circumplex models of interpersonal traits: that of Wiggins (1979) and that of Conte & Plutchik (1981).

Self-presentation bias may distort trait ratings; therefore social desira-

bility must be considered. The two techniques reported in the literature (i.e., the bogus pipeline paradigm, and Snyder et al.'s (1979) method of disguising the real choice within another choice) have certain serious limitations: The former has yielded inconsistent results (cf. Miller, 1982) and can be criticized on ethical grounds, while the latter technique is not always feasible.

In the present investigation (Study 1), a third technique for eliminating social desirability effects was used: People were asked to report not their own views but the stereotypes of others similar to themselves. Because of ambiguity due to assessing knowledge of stereotypes rather than personal agreement with trait patterns, in Study 2 a different group of subjects provided their own views of traits found in Study 1 to characterize wheelchair user students.

It was expected that more socially undesirable traits and fewer desirable ones would be attributed to physically disabled than to able-bodied students. Able-bodied females have been stereotyped with a variety of negative characteristics, such as "cries easily" and "needs security"; able-bodied males, on the other hand, are rarely attributed these traits (Spence, Helmreich, & Stapp, 1975). Therefore, it was expected that the socially undesirable stereotypes of able-bodied and disabled females would be similar and that disabled males and females would be perceived in similar ways. Since many "feminine" traits are not generally considered male stereotypes, it was also expected that stereotypes of disabled and of able-bodied males would be very different.

Study 1

Method

Subjects

One hundred and ninety-four volunteer college students (102 males and 92 females) enrolled in eight sections of General Psychology served as subjects; they ranged in age from 17 to 20. None were disabled. Thirty-four percent had some previous contact with physically disabled people and 66% did not.

Traits

One hundred and seventy socially desirable and 170 socially undesirable traits from Anderson's (1968), Wiggins' (1979), and Conte and Plutchik's (1981) lists were used. All 128 interpersonal traits used by Wiggins (1979) were included. Social desirability values for these are available from Norman's (1967) taxonomy: Values range from 1 to 9. Traits with a social desirability value of 5 or less were considered undesirable; those with values greater than 5 were considered desirable. One hundred and seventy-four traits high in

“meaningfulness” were selected from Anderson’s (1968) list, which also provides social desirability values: The 87 considered undesirable had values ranging from 72 to 254; those considered desirable had values ranging from 336 to 555. Conte and Plutchik’s (1981) circumplex model applies to a very large number of interpersonal traits. For the present investigation, only those were selected which met one of the following criteria: present in Anderson’s or Wiggins’ list or one of the frequently mentioned characteristics commonly attributed to disabled people in the literature.

Procedure

All subjects were administered two adjective checklists in one of four experimental conditions: stimulus person physically disabled (wheelchair user) male, disabled female, able-bodied male, or able-bodied female college student. Stimulus persons were described in a brief oral statement; this indicated that the person was an 18-year-old, first-year college student. In the disabled condition, it was specified that the person was a wheelchair user.

Each of the two adjective checklists listed 85 traits: One of these consisted of socially desirable traits, the other of undesirable ones. Order of checklist presentation was counterbalanced. Because asking each subject to read all 340 traits seemed inappropriate, two groups of subjects were tested under the same conditions. This meant that each subject received two lists comprised of a total of only 170 of the 340 traits evaluated: 85 socially desirable and 85 undesirable ones. Subjects checked as many traits on both lists as they believed applied to the stimulus person. To avoid bias due to social desirability, subjects were instructed to complete the checklists not in terms of their own views but in terms of commonly held stereotypes by college students.

Results

Most of the data were analyzed using a 2-way factorial design [2 (Gender of Stimulus Person) \times 2 (Disabled/Able-Bodied Stimulus Person)]. Socially desirable and undesirable traits were analyzed separately.

Results indicate that more socially desirable traits and fewer undesirable ones were attributed to females than to males ($F(1,169) = 14.75, p < .001$; and $F(1,169) = 45.31, p < .001$, respectively). In addition, fewer socially desirable traits were attributed to disabled students than to able-bodied, $F(1,169) = 25.35, p < .001$. For both desirable and undesirable traits, the Gender of Stimulus Person \times Disabled/Able-bodied interaction was significant, ($F(1,169) = 4.22, p < .05$, and $F(1,169) = 6.43, p < .05$, respectively). Figure 1 presents the means. Tukey h.s.d. tests indicate that significantly ($p < .01$) fewer socially desirable traits were attributed to disabled males than to dis-

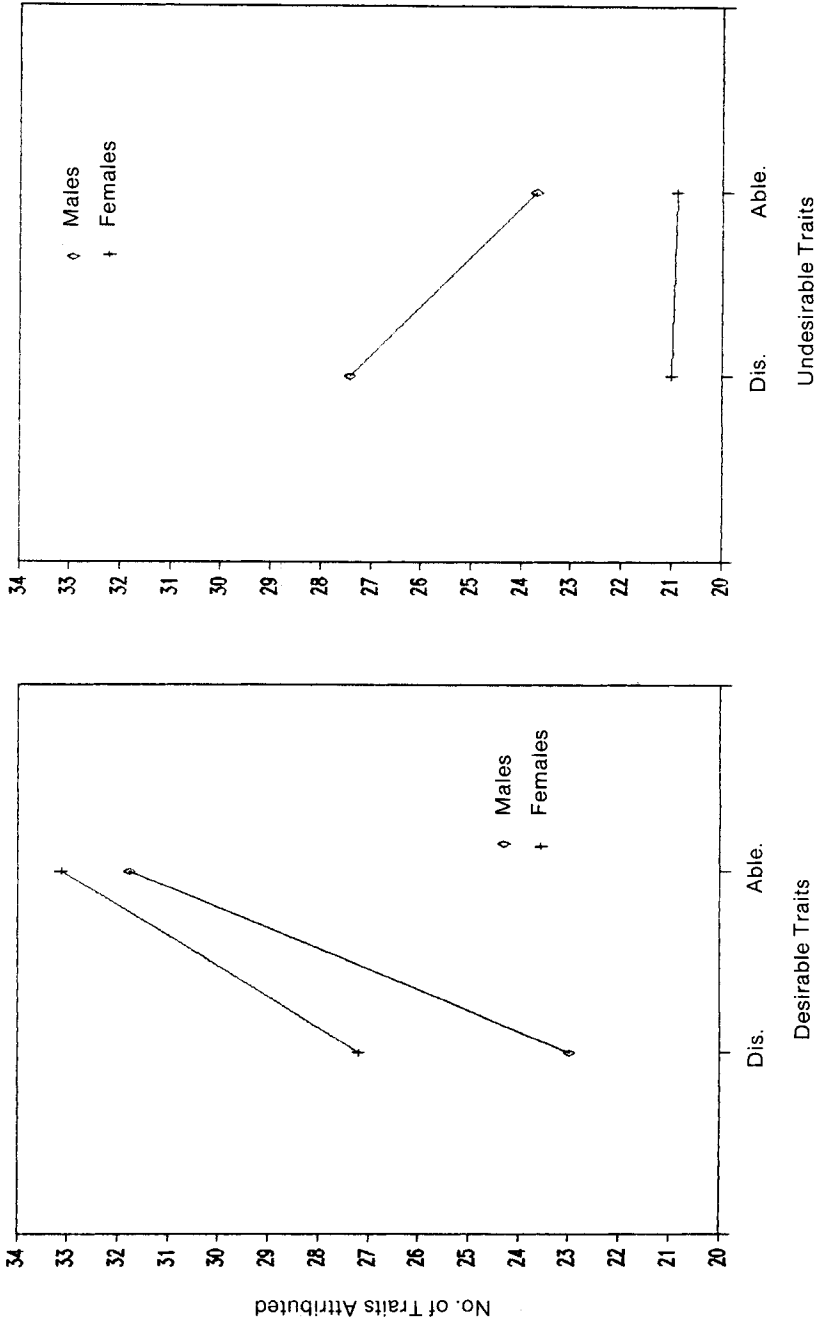


Figure 1. Disabled/Able-bodied X Gender of Stimulus Person interactions.

abled females and that fewer desirable traits were attributed to disabled females than to either able-bodied males or females, who were found not to differ. Results also show that significantly ($p < .05$) more socially undesirable traits were attributed to disabled than to able-bodied males and that while more undesirable traits were attributed to both groups of males, attributions to disabled and able-bodied females did not differ.

To determine whether gender or able-bodied vs. disabled status is the more powerful grouping variable, Chi-square tests of association were carried out on the number of traits commonly attributed (by at least 40% of subjects) to disabled and to able-bodied males and females. Frequencies, presented in Table 1, show that for both socially desirable and undesirable traits, disabled/able-bodied status is more important than gender, $\chi^2(2, N = 83) = 8.87, p < .05$, and $\chi^2(2, N = 31) = 17.41, p < .001$, respectively. Therefore, the gender variable was dropped from most subsequent analyses.

One of the objectives was to determine what traits are commonly attributed to disabled, but not to able-bodied students, and what traits the two groups have in common. Table 2 lists these and shows that while a few socially desirable traits were common to both disabled and able-bodied students, none of the undesirable traits was common to both groups. Furthermore, while there was good agreement among subjects concerning the nature of the undesirable traits which characterize disabled students and the desirable ones which characterize the able-bodied, the converse appears not to be true. Clearly, stereotypes of disabled and able-bodied students are different.

To clarify these differences, the data were analyzed to test the applicability of both Wiggins' (1979) and Conte and Plutchik's (1981) circumplex models. Wiggins' model employs eight categories, each consisting of 16 traits. The structure of the categories is such that four categories represent the polar opposites of the other four. To assess differences between attributions

Table 1

Number of Traits in Common

Stimulus person	Number of socially desirable traits in common		Number of socially undesirable traits in common	
	Disabled female	Able-bodied male	Disabled female	Able-bodied male
Disabled male	16	7	17	3
Able-bodied female	20	40	1	10

Table 2

Common Traits Attributed to Disabled and to Able-bodied College Students

To male and female disabled students (but not to able-bodied) ^a			To both disabled and able-bodied male and female students ^b			To male and female able-bodied students (but not to disabled) ^c		
Rank	Trait	% of Ss	Rank	Trait	% of Ss	Rank	Trait	% of Ss
Socially desirable traits			Socially desirable traits			Socially desirable traits		
1*	Quiet	63%	1	Mature	63%	1	Capable	77%
2*	Honest	49%	2	Hard-working	60%	2	Talkative	73%
3	Gentlehearted	45%	3	Likeable	57%	3	Outgoing	60%
4*	Softhearted	45%	4	Self-disciplined	53%	4*	Sociable	60%
5*	Nonegotistical	43%	5	Well-mannered	51%	5	Fun-to-be-with	58%
6*	Undemanding	40%	6	Good-natured	49%	6	Proud	58%
Socially undesirable traits			Socially undesirable traits			Socially undesirable traits		
1	Isolated	80%	Socially undesirable traits			10	Attractive	53%
2	Lonely	76%	None			11	Intelligent	53%
3	Helpless	75%				12	Amusing	51%
4	Silent	73%				13	Bright	51%
5	Depressed	69%				14	Curious	51%
						7	Desirable	57%
						8	Good-looking	57%
						9	Self-assured	56%

6	Unpopular	68%	15	Decent	49%
7	Distant	60%	16	Independent	49%
8	Shy	60%	17*	Optimistic	49%
9	Unappealing	55%	18	Easy-going	48%
10	Unsociable	55%	19	Aggressive	47%
11*	Nervous	54%	20	Energetic	47%
12*	Unaggressive	53%	21*	Humorous	47%
13*	Insecure	51%	22	Happy	44%
14*	Dependent	49%	23*	Popular	43%
15*	Unhappy	49%	24*	Dependable	42%
Social undesirable traits					
1	Loud-mouthed	62%			
2	Conceited	59%			
3*	Demanding	55%			
4*	Argumentative	51%			
5*	Overconfident	51%			
6*	Phony	49%			
7*	Complaining	49%			
8	Bossy	47%			
9	Self-centered	47%			

Note. Traits marked with * comprise the College Student Trait Checklist used in Study 2.

^aAll traits endorsed by $\geq 40\%$ of Ss for both male and female disabled students and by $< 40\%$ for either male or female able-bodied students are included. ^bAll traits endorsed by $\geq 40\%$ of Ss for all 4 stimulus persons. ^cAs in (a) above, but for able-bodied and disabled students, respectively.

concerning traits of able-bodied and disabled students, an ANOVA comparison was carried out; results show a significant Disabled/Able-bodied Stimulus Person \times Category interaction, $F(7, 117) = 27.48, p < .001$. Tukey h.s.d. tests show significant ($p < .01$ or $.05$) differences between the disabled and able-bodied conditions for six of the eight categories: while there were no differences between the disabled and able-bodied conditions on the Warm-Agreeable or on the Cold-Quarrelsome categories, disabled students were seen to be more Aloof-Introverted, Lazy-Submissive, and Unassuming-Ingenuous, while able-bodied students were seen to be more Gregarious-Extraverted, Ambitious-Dominant, and Arrogant-Calculating. That disabled students were seen not only as very different but as having "opposite" characteristics from able-bodied students can be clearly seen in Figure 2. Furthermore, the average social desirability of characteristics attributed to disabled students (values from Norman, 1967) is considerably lower ($M = 4.21$) than that of traits attributed to able-bodied students ($M = 5.98$).

A second test of "opposite" characteristics is provided by analyses of traits found in Conte and Plutchik's (1981) circumplex model which locates adjectives at various points around the circumference of a circle. Figure 3 locates on the circumference traits endorsed by 40% or more of subjects in the able-bodied condition (and by fewer than 40% in the disabled) and those endorsed by at least 40% of the sample in the disabled student condition (and by less than 40% in the able-bodied). Figure 3 clearly shows that characteristics frequently attributed to disabled students are not only different from those attributed to able-bodied students but also "opposite." Again, the social desirability (values from Anderson, 1968) of traits attributed to disabled students is lower ($M = 205.33$) than those attributed to able-bodied students ($M = 354.86$).

Discussion

Clear differences were found in traits attributed to disabled and to able-bodied students. Not only were fewer socially desirable and more undesirable traits attributed to disabled than to able-bodied students, but when tested for "sameness" vs. "oppositeness," traits attributed to disabled students were shown to be clearly the "opposite" of those attributed to the able-bodied. Before firm conclusions concerning stereotyping of disabled students could be made, it was necessary to evaluate the validity of the instructional set used in this study. Therefore, in Study 2 a trait checklist based on the findings of Study 1 was administered under a more conventional instructional set.

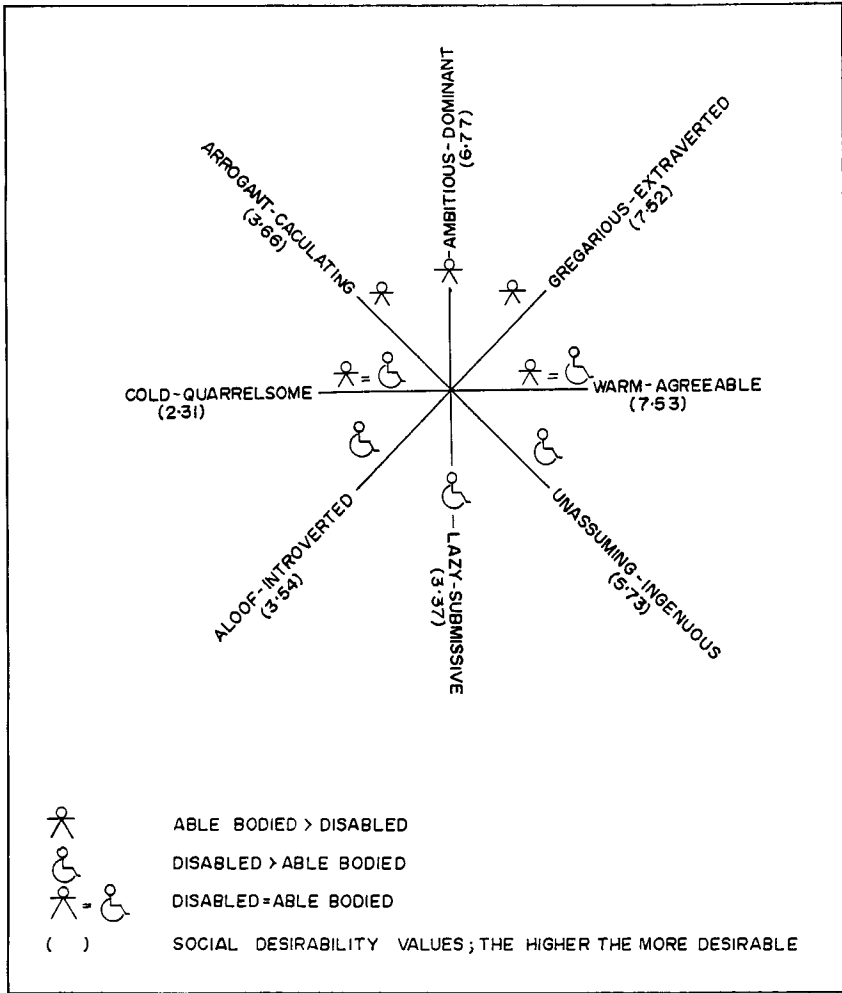


Figure 2. Wiggins' circumplex model of interpersonal traits.

Study 2

Method

Subjects

One hundred and fifteen first- and second-year college students (50 males and 65 females) were subjects; they were participating in a larger study

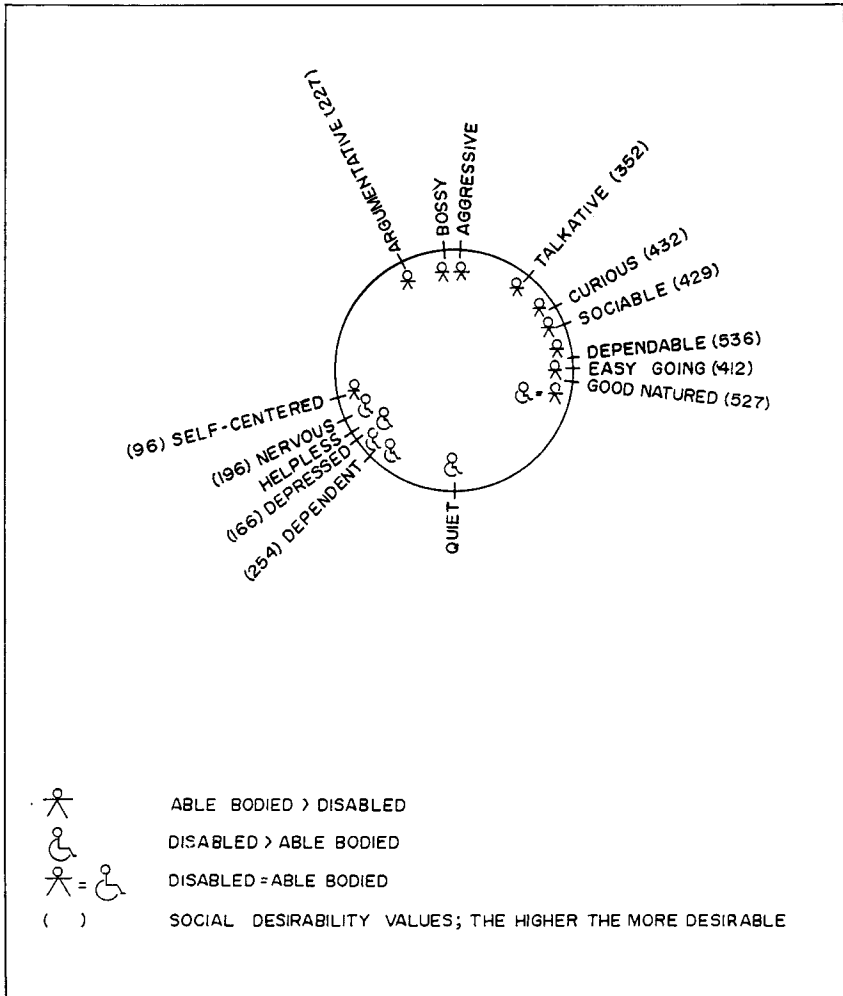


Figure 3. Conte and Plutchik's circumplex model of interpersonal traits.

described by Fichten (in press). Mean age for both males and females was 18 years. None were physically disabled.

Measures

General Information Form. This measure included questions about gender, age, absence or presence of physical disability, and previous contact with physically disabled people (relative, volunteer, friend, acquaintance). Ease with physically disabled students was assessed on a 6-point scale.

Social Avoidance and Distress Scale [SAD] (Watson and Friend, 1969). The SAD is one of the most frequently used measures of social anxiety.

Attitudes Toward Disabled Persons Scale [ATDP]–Form O (Yuker, Block, & Youngg, 1970). This widely used measure consists of 30 Likert-type items and assesses the degree to which people see disabled persons' adjustment and needs as different from those of able-bodied people. The single summary score is usually interpreted as a measure of acceptance-rejection.

College Student Trait Checklists [A-D]. This measure consists of two lists, each consisting of 10 traits. The Positive Stereotypes list includes 5 socially desirable traits commonly (by at least 40% of subjects in Study 1) attributed to disabled (but not able-bodied) college students and 5 socially desirable traits commonly attributed to able-bodied (but not disabled) students. The Negative Stereotypes list was compiled in the same manner. Items were matched across the "disabled" and "able-bodied" lists in terms of frequency of endorsement; means of traits included are as follows: desirable "disabled" traits = 48%, desirable "able-bodied" traits = 48%, undesirable "disabled" traits = 51%, undesirable "able-bodied" traits = 51%. The measure, thus, includes a sample of moderately typical traits attributed to each group in Study 1. Traits included in this measure are marked with an asterisk in Table 2. Three scores are derived from this measure: Positive, Negative, and Total Stereotyping.

Procedure

Subjects were randomly assigned to the two experimental conditions: disabled or able-bodied stimulus person. Stimulus persons were described as in Study 1. Subjects completed the General Information Form, SAD, and ATDP. Subjects in the able-bodied stimulus person condition completed the College Student Trait Checklists with reference to a same-sex able-bodied student; those in the disabled condition completed it with reference to a same-sex wheelchair user student. Subjects were instructed to select 5 traits from the Positive Stereotypes list and 5 from the Negative Stereotypes list which, in their opinion, best described the stimulus person.

Results

The College Student Trait Checklists measure was shown to discriminate between attributions about disabled and able-bodied students, $F(1,40) = 54.07, p < .001$; more socially desirable ($M = 3.21$) and undesirable ($M = 3.83$) "handicapped" stereotypes were attributed to disabled than to able-bodied ($M = 1.98, M = 2.61$, respectively) college students. There were no significant sex differences or interactions. Since the traits selected for this measure were

those endorsed by only 50% of subjects in Study 1, (i.e., traits clearly typical of each group were not included), the present findings suggest that results obtained in Study 1 are not artifactual and, thus, reflect reality.

Approximately 50% of subjects had previous contact with physically disabled people. When the effects of contact were examined, no significant differences were found in "handicapped" trait attributions to disabled students by subjects who had had contact and those who did not.

To assess the internal consistency of the College Student Trait Checklists and to determine the relationship between stereotyping and other measures, Pearson-product moment correlation coefficients were calculated. Results show that the College Student Trait Checklists appear to have reasonable internal consistency: the two sub-scales, Positive and Negative Stereotyping, are modestly related to one another [$r(45) = .317, p < .05$, in the disabled and $r(42) = .442, p < .001$ in the able-bodied condition], and scores on both subscales are strongly related to the summary Total Stereotyping score in both experimental conditions (r values ranged from .775 to .871, $p < .001$).

The number of both positive and negative "handicapped" traits attributed were found to be negatively related to ease with disabled students [$r(45) = -.354, p < .05$; $r(45) = -.222, p < .10$, respectively]. Stereotyping in the negative direction was marginally related to lack of acceptance of disabled people as measured by ATDP scores [$r(45) = -.19, p < .10$]. The relationship between the tendency to stereotype people in general (i.e., the number of "handicapped" stereotypes in the disabled condition and the number of "typical able-bodied" stereotypes in the able-bodied condition) and social anxiety was also examined. Results show that in both experimental conditions, the tendency to stereotype people (Total Stereotyping) was clearly related to social anxiety [$r(45) = .369, p < .01$ in the disabled and $r(42) = .277, p < .05$ in the able-bodied condition].

Discussion

In Study 2, as in Study 1, differences were found in stereotyping of disabled and able-bodied students. Stereotypes of each group identified in Study 1 were shown to characterize disabled and able-bodied students in Study 2 as well. Since the methodology of Study 2 markedly differs from that of Study 1 and since traits used in Study 2 were deliberately selected in such a way as to make such differences difficult to obtain, the results provide evidence for the validity of the instructional set used in Study 1; the "answer as a typical person would" paradigm appears to be a promising technique for the elimination of sympathy and social desirability effects. Study 2 also provided some evidence of reliability and validity for the College Student Trait Checklists; this measure appears to be useful as a rapid means of assessing both socially desirable

and undesirable stereotyping of physically disabled as well as of able-bodied college students. The results also showed (1) that negative stereotyping is marginally related to negative attitudes toward disabled persons, (2) that stereotyping, both in the positive and negative directions, is related to lack of ease with disabled students, and (3) that the tendency to stereotype people in general is related to social anxiety.

General Discussion

The results show that the stereotypes attributed by able-bodied college students to their physically disabled peers can interfere with comfortable interaction between the two groups. Disabled students, both males and females, were attributed characteristics that are not only different but also the "opposite" of those attributed to able-bodied students. For example, disabled students were characterized as aloof-introverted, lazy-submissive, and ingenuous-unassuming. These characteristics are the "opposite" of those attributed to able-bodied students: gregarious-extraverted, ambitious-dominant, and calculating-arrogant (Wiggins, 1979). Traits attributed to disabled students were also less socially desirable; disabled males were seen especially negatively. Indeed, the disabled/able-bodied distinction was so strong that it overrode even the effects of sex role stereotypes. For example, disabled males, unlike the able-bodied, were seen as possessing more traits in common with disabled females than with able-bodied males.

That "Sympathy" is but the other side of the coin of aversion as indicated by the findings that stereotyping in the positive and negative directions were closely related and that stereotyping in either direction was related to lack of ease with physically disabled students. Many disabled people are acutely aware that "sympathetic" characterization in the media of disabled people as pitiable dependent individuals in need of help and charity from those more fortunate is not only degrading and humiliating, but also deprives them of the opportunity to lead responsible adult social lives. The result of the present study demonstrate not only that positive and negative stereotypes are related but also that positive stereotypic imagery is related to lack of comfort with disabled people. In attempts to integrate physically disabled college students, appeals for pity or charity certainly seem undesirable.

Stereotypes which indicate that those with disabilities are different can have consequences other than merely making able-bodied people uncomfortable. First, since people generally like and seek out contact with people they perceive as similar to themselves, one would expect able-bodied students to avoid or limit their contact with presumably dissimilar disabled classmates. If interactions does take place, preconceptions can negatively influence the encounter, thereby discouraging future attempts.

Education for disabled people is particularly important as it leads to economic independence through effective competition in the work world. Because stereotypes can hamper integration of disabled college students into academic life, their elimination is an important issue. How best to change negative attitudes and stereotyped views of disabled people is a much debated topic. Several approaches have been shown to be ineffective. For example, in the present study, it was found that contact with disabled people was not related to an absence of stereotyping. Given the contradictory evidence concerning the consequences of contact (e.g., Antonak, 1981; English, 1971; Robillard & Fichten, 1985), it is probably futile to simply encourage contact, without additional intervention, between disabled and able-bodied college students. Other techniques, such as encouraging students to empathize with a disabled peer (Fichten, Compton, & Amsel, 1985) or to simulate a disability as a way of experiencing what it is like to be handicapped (cf. Wright, 1978), have also been shown to be ineffective. Large public relation campaigns, while providing visibility for disabled people, also have been shown to have no major impact on attitudes (Fichten, Hines, & Amsel, 1985).

What, then, could be done in the college context? First of all, "sensitization" programs could emphasize that the common stereotypes are not applicable to the majority of wheelchair users. It should be stressed that stereotyped positive as well as negative images of disabled people both provide a false picture of reality. Traits listed in Table 2 and Figures 2 and 3 could profitably be used to identify the specific images to target for change.

It has been suggested that extended contact between disabled and able-bodied people, as equals, may be an effective solution (e.g., Anthony, 1972; Bender, 1981). In an academic environment, opportunities for equal status contact are many. The problem remains, however, as to how to instigate such contact and how to ensure that once initiated, the equal status relationship continues. Findings from the equity, prejudice, social learning, and attribution literatures provide some suggestions. Professors, student groups, or student service personnel who attempt to encourage collaboration between disabled and able-bodied students should ensure that there is reciprocity (i.e., that the relationship is not one-sided, with the able-bodied student helping the disabled student who only receives). If possible, there should be a "superordinate goal," such as a group or team project which requires collaboration between the disabled student and able-bodied classmates. Able-bodied students who have a positive, egalitarian view of disabled students could be encouraged to join work or study groups which include a disabled student in order to provide a role model. Because people who anticipate future interaction with an individual are more likely to focus on that person's positive attributes than are people who do not anticipate such interaction (Knight & Vallacher, 1981), contact, once initiated, should be seen to involve future

interaction. Last but not least, emphasis should be placed on the disabled student's abilities rather than on his or her disabilities.

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