

A STUDY OF THE NATURE AND DETERMINANTS OF NON-DISABLED
PERSONS ATTITUDES TOWARDS PERSONS WITH PHYSICAL
DISABILITIES AND DISABLED PERSONS ATTITUDES
TOWARDS THEIR DISABILITIES AND SELF-
ACCEPTANCE AS MEASURED BY THE
ATTITUDES TOWARD DISABLED
PERSONS SCALE

By

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-- ABSTRACT

A STUDY OF THE NATURE AND DETERMINANTS OF NON-DISABLED
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The research objectives of this study were to test a number of hypothesized relationships between the dependent variables, that is, attitudes towards disabled persons and attitude intensity, and certain independent variables, that is, contact, disability, religiosity and demographic variables. While the dependent variables functioned as criteria, it was assumed that the independent variables functioned as correlates or predictors.

A set of three research instruments - the Attitudes Toward Disabled Persons Scale, a Personal Questionnaire and a Personal Questionnaire re Handicapped Persons - was completed by each of 101 non-disabled persons and 53 disabled persons in Cape Town, South Africa.

Hypotheses construction was based on theoretical and empirical considerations, which were extensively reviewed. Hypothesis 1 related to a difference in attitudes between the two research samples. No significant difference was found. Hypothesis 2 was confirmed, in that there was no significant difference in attitudes among persons with different types of disabilities.

✓

Hypotheses 3 to 5 related specifically to attitudes and intensity of attitudes as these were influenced by several contact variables, such as frequency, amount, enjoyment and ease of avoidance of contact, as well as alternative opportunities to contact and the degree of intimacy of contact. As predicted, for the non-disabled group, there was a significant positive relationship between the degree of personal contact with disabled persons and favourable attitudes towards them. For the non-disabled group, a significant positive relationship was found between contact frequency and favourableness when related to the other contact variables.

Hypotheses 6 to 10 related to attitudes as they were influenced by the demographic variables of age, sex, education, and religiosity. Only the hypothesis stating that no differences exist between the attitudes of disabled persons at different educational levels, was confirmed. The majority of the unconfirmed hypotheses were, nevertheless, in a positive direction. The results of the hypotheses were compared with the results of previous studies on the same problem.

The ATDP was discussed at some length in connection with content scalability, facet theory analysis, factor analysis, several response sets, meaning equivalence and the underlying assumptions. Recommendations were made and suggestions put forward concerning the ATDP and the research samples.

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CHAPTER 1.

INTRODUCTION.

Nature of the problem.

Viewed in an historical and cross-cultural perspective a great variety of beliefs, customs and attitudes have provided norms of behaviour patterns towards those members of society who are disabled in some way or who, in other ways, are distinctive in appearance and behaviour or who find barriers to economic and social fulfilment. Among preliterate societies, infanticide with deformed babies was commonly practiced. In contrast, several societies have held certain types of disabilities in reverence and accorded the disabled person with supernatural powers or placed him in positions of authority. For example, in Turkey it is customary for blind men to recite the Koran and they officiate in religious rites since it is believed that their prayers are more welcome to God than those of the populace.

Throughout history the behaviour towards disabled persons, which usually reflect the prevailing cultural values and attitudes, was in general influenced by whether the disability was curable or not, and by its relationship to the good of the society as a whole. Maisel (in Wright, 1960) has compiled data on more than 50 primitive societies, showing their reactions to various forms of disability. The following examples are evidence of the different reactions among these societies:

'In the Azande tribe, infanticide is not practiced. "Abnormal children are never killed, nor do they seem to lack the love of their parents." ... Among the Navajo Indians, the ideals proscribed sadistic humour against those with physical deviations ... Among the Masai, misshapen and especially weakly children are killed immediately after birth. Among the Dieri, a tribe of Australian aboriginies,

"infanticide is frequent, applying to the children of unmarried girls and to deformed children."

Among the Chagga, an East African tribe, cripples were felt to satisfy evil spirits, thereby making possible normality in others. Hence they did not dare to kill cripples ...

Among the Truk peoples of the East Central Carolines, only the healthy and strong are esteemed ... Old people and the disabled are considered to be superfluous.

✓ Among the Wogeo, a New Guinea Tribe, children with obvious deformities are buried alive at birth, but children crippled in later life are looked after with loving care.

Among the Dahomeans of Western Africa, it is a singular fact that the state constables are selected from deformed persons. Children born with anomalous physical characteristics are held to be under the guardianship of special supernatural agents ..

Among the Ponape of the Eastern Carolines, crippled and insane children were treated like normal children.

Among the Witoto Indians of the North West Amazona ... if the child becomes deformed later, the medicine man declares that it was caused by some evil spirits and may work ill to the tribe, making it necessary to dispose of the person.

✓ Among the Jukun, a Sudanese Kingdom, deformed children are not allowed to live but are left to perish in a bush or a cave, for it is believed that such children are begotten by evil spirits.

Among the Semang of the Malay Peninsula, the person looked upon as a sort of chief to settle disputes and admonish if necessary, was a severely crippled man ...

Among the Macri of New Zealand, deformed persons meet with little sympathy, and often receive a castigating nickname ' (Maisel, in Wright, 1960, pp. 254 - 255).

From Maisel's total list it would appear that there is a preponderance of negative attitudes, but Wright points out that such frequency may have diverse significance, in this case being merely a count of impressionistic, societal features.

'For example, just because infanticide is shocking even to the most objective ... investigator, it is likely to be recorded as an impressive fact, whereas a benign attitude to the child with physical abnormalities is more likely to go unheeded' (Wright, 1960, p.255).

Various attitudes towards disabilities are found in religious documents. In the Old Testament, 2 Samuel V 8, commanded 'The blind and the lame shall not come into the house.' Illness and physical disability were conceived as punishment for sin. The New Testament viewed disease and suffering not as a disgrace nor as punishment for sin but as a means of salvation and 'a way of grace.' Despite this Christian doctrine, in the Middle Ages all sections of social life were greatly influenced by superstitions and mysticism with the result that the disabled and obviously defective person were believed to be possessed or cursed by the devil. They were generally the scapegoats for all societal misfortunes and were subjected to a variety of treatments ranging from fear, hatred and ostracism to caste-like separation, slavery, torture and even death.

In the classical period of Greece (480 - 332 B.C.E.) and long thereafter, health and bodily perfection were most highly esteemed. Illness and deformity marked the person as an inferior being, especially if his condition was incurable. This derogatory attitude towards the diseased and disabled person is not always evident in Greek literature. For example, Philoctetes, one of Sophocles (497/94 - 405/4 B.C.E.) heroes suffered from a 'loathsome disease.' Euripides (c. 480 - 406 B.C.E.) wrote a play about the hero Telephus who was lame. In Greek mythology, Hephaestus, the god of smiths and other skilled workmen who used fire, was also lame. Many soothsayers were blind.

In more recent times conflicting attitudes are still apparent, as Myerson (1948, p.3) has pointed out. Goebbels has been 'explained' in terms of his club-foot; but then Edison has been 'explained' in terms of his deafness, while it is said that F.D.

Rooseveltdt 'became great thru' polio.' This type of 'explanation' descends to an Aristotelian level. A whole gamut of personality traits may be attributed to a person, simply 'because' he is disabled. We are not much the wiser when so many conclusions are stated in terms of the nature of the disability instead of systematic verifiable theories. A good theory makes practical sense.

Cultural attitudes towards physically disabled persons have been related to the economic features of a society. Hanks and Hanks (1948), drawing upon the attitudes towards and social positions of disabled persons in several non-occidental societies, tentatively propose the following hypotheses:

'Protection of the physically handicapped and social participation for them is increased in societies where: (1) the level of production is higher in proportion to the population and its distribution more nearly equal. (2) competitive factors in individuals or group achievement are minimized. (3) the criteria of achievement are less formally absolute as in hierarchial social structures, and more weighted with concern for the individual capacity, as in democratic social structures' (p. 20).

However, Hanks and Hanks themselves caution that the data here are inadequate and one should not be misled by the simplicity of economic features. For example, they record that in Greenland there is a narrow margin of economic surplus among the Eskimos. When an Eskimo becomes an invalid, he is cared for only if he is not an economic liability, in which case he commits suicide or is abandoned. A high instance of infanticide also occurs for the congenitally disabled. In contrast, the Paiute of the Great Basin of North America had a margin of existence almost equally as precarious but they neither practiced infanticide nor abandoned their disabled. While economic factors in attitudes towards atypical

physique are important they only contribute part of a full understanding of societal attitudes in general.

On a general level, knowledge of attitudes is essential in the understanding and explanation of social behaviour. More specifically, knowledge of the attitudes of non-disabled persons towards disabled persons leads to a better understanding of the interaction between them. It also is necessary in the rehabilitation of the disabled for they must be taught to accommodate these attitudes. If a non-disabled person has negative and rejecting attitudes he will not want to interact or have any social intercourse with a disabled person and will try to avoid him. His avoidance of any contact with a disabled person may of course perpetuate his negative and rejecting attitudes, in so far as close personal contact may provide a test for his present attitudes and be instrumental in changing them in a more positive direction. On the other hand, if a non-disabled person has positive and accepting attitudes, he will not want to avoid interaction with a disabled person and will tend to have a friendly disposition towards him. Generally, the person's disability will recede into the background and the non-disabled person will accept the disabled person as a person who happens to have a disability.

Of equal importance are the attitudes of disabled persons towards other disabled persons and towards themselves. A disabled person's attitude towards himself and the degree of self-acceptance does not seem to be a factor of the type or extent of his disability (Yuker et al. 1960, 1962, 1966). A paraplegic cannot be assumed to have more negative attitudes than a person with a club foot. It is quite possible for severely disabled persons to have positive attitudes and a high degree of self-acceptance and for mildly disabled

persons to have negative attitudes and a low degree of self-acceptance. Knowledge of a disabled person's attitude towards himself will render knowledge of how he will behave in different social situations. The disabled person, to a large extent irrespective of the extent of his disability, who has positive attitudes and is self-accepting will view his disability in a realistic manner, be highly motivated to make the best of his abilities and live as full a life as possible.

The physically disabled may be said to have a minority social status due to the negative attitudes of the physically normal majority towards them. Except for a few, their minority position is not unlike that of other minority groups. Tenny (1953) has summarized the main implications of the minority status of disabled persons:

- '(1) A handicap, like other differences tends to produce social distance. A handicapped person being treated as an outsider accepts his minority status and plays the role; he fights back or he retreats and withdraws within himself.
- (2) The handicapped, like other minorities, are often unfavorably portrayed in literature, in drama and in slapstick humor.
- (3) The handicapped group like ... racial groups is frequently faced with segregation ...
- (4) Like the other minorities they suffer vocational disadvantage over and above that involved in the nature of the handicap ... As an adult he is faced with the harsh reality of competition, complicated by discrimination' (p. 261).

In modern industrial societies, although great strides are being made to improve the social psychological, economic and physical conditions of the disabled, discrimination against them still persists, although often it is subtly disguised and veiled beneath a veneer of rationalization. Sometimes it is quite blatant and even law-enforced as Doob (1971) has shown by citing a San Francisco city ordinance which was only recently rescinded:

'It shall be unlawful for any person who is diseased, maimed, mutilated or deformed as to be an unsightly or improper person to be allowed in or on public streets, ... thoroughfares or public places, to expose himself/herself, or his/her injury to public view' (Doob, 1971 p. 47).

Today's 'enlightened' societies attempt to abolish such discriminatory laws and, in fact, legislation catering for disabled persons' needs and social rights is being incorporated into the general legislation, for instance, the Disabled Persons (Employment) Acts of 1944 and 1948 and the Chronically Sick and Disabled Persons Act of 1970 in Britain; and the Physically Handicapped Persons' Employment Promotion Laws (1960) and the Basic Law for the Welfare of the Physically and Mentally Handicapped Person (1970) in Japan. However, disabled persons still face unwritten codes of discrimination and in many ways are made to feel different and are made aware of the negative evaluations associated with atypical physiques as when cultural stereotypes are portrayed in associating physical beauty with positive traits, such as kind, strong, etc., and physical ugliness with evil, cruel, weak, etc. No doubt this is a major mechanism in transmitting negative attitudes to children. Another way in which children learn to evaluate negatively disabled persons is through their literature, where persons with a disability or handicap are often unfavourably represented, e.g. Captain Hook, Long John Silver, etc. This may be contrasted to positive attitudes associated with beauty, such as Prince Charming and Cinderella.

It does seem that even from nursery school there is a general consensus of opinion about who is beautiful and who is not. Moreover, according to the physical appearance of the person, different personality characteristics are ascribed to him.

This has important implications for an understanding of negative and positive attitudes towards disabled persons. A poignant illustration is a study by Berscheid and Walster (1972). They investigated the reactions of nursery school children, aged from four to six, to their classmates who had been judged attractive or unattractive by adults. Pre-judged unattractive boys were found to be least liked, whereas pre-judged unattractive girls were most liked only by the younger children and least liked by the older children. Moreover, the unattractive boys were described as more aggressive, more antisocial, and, with unattractive girls, less independent, more afraid and more scaring than attractive classmates. The data did not reveal whether the children's attitudes were based on factual observations or on learned social stereotypes. However, Berscheid and Walster maintain that

'It is possible that physical appearance stereotypes have already been absorbed at this early age ... Whether or not attractive and unattractive children really do behave differently, their classmates think they do and they doubtless act accordingly. Physical attractiveness thus may become a major factor in the social development of the child. It could affect his self-image and his first social relationships' (p.44).

The attitudes of the disabled person towards himself are likely to be influenced by the way the 'normal' members of a society stereotype him, that is, the way they pre-judge him in terms of group membership, instead of reacting to him as an individual. Typical societal stereotypes appear to be that they are psychologically and sociologically different from 'normal' persons; they are inferior; they are helpless; they are objects of pity and condescension; and so on. Thus the disabled person in addition to realistically accepting his disability, must come to terms with the attitudes and the expectations of the non-disabled majority and

with the stereotypes, willy-nilly imputed to him by society, in developing a 'well-adjusted' self-image. Not only is it important to improve the attitudes of disabled persons, but it is also important, if not more so, to improve the attitudes of non-disabled persons towards the disabled. It may well be that if the non-disabled members of a society were more accepting of their disabled fellow citizens, both socially and vocationally, the disabled person would be more accepting of himself.

There is a singularly noticeable lack of sociological and, to a slightly lesser degree, of psychological research concerning disabled persons in South Africa. As far as could be ascertained the first research in South Africa about the disabled was a psychological study of epileptics in 1946. Since then there have been approximately 22 psychological studies and only 2 sociological studies into various aspects of the problems facing disabled persons. Of these, 16 have been in English and the remaining 9 in Afrikaans. While this is a much neglected field for research, the need for such research is apparently slowly being realized, since forty percent (10) of the above theses have been carried out from 1970. However, there seems to be only a single study, done in 1967, which has investigated the social-psychological conditions with which the disabled have to face in a society of non-disabled - and that the psycho-social problems of adjustment to paraplegia.

The present study took place in Cape Town and is the first of its kind in South Africa. It is intended to fill a gap, albeit small, in the research vacuum indicated above. It is aimed at measuring the attitudes of two groups, the non-disabled and the disabled, the latter being too frequently assumed and seen through

other people's eyes and too often not consulted and seen as they see themselves.

Research Objectives.

The purpose of this study is to test a number of stated hypothesized relationships between the dependent variables, i.e. attitudes towards disabled persons and attitude intensity, and certain independent variables, i.e. contact, disability, religiosity and demographic variables. The dependent variables function as criterions while, theoretically, the independent variables function as correlates or predictors. One set of three instruments, i.e. the Attitude Towards Disabled Persons Scale (ATDP), a Personal Questionnaire (PQ) and a Personal Questionnaire re Handicapped Persons (PQ:HP) will be employed in order to elicit the variables. A comparison of attitudes will be made within and between the two research groups, namely, non-disabled persons and disabled persons. The results of other studies which have tested the same hypotheses will also be compared.

Definition of Relevant Terms.

The following terms are defined according to the particular meaning they have in this study.

Attitude: Two definitions are necessary here. The first definition is a combination of Katz (1960, p. 168), and Cohen (1973, p.519), and Doob (1971a, p.8) : An attitude is the predisposition of an individual to evaluate and to act accordingly towards some symbol or object or aspect of his world in a favourable or unfavourable manner, an implicit response which is evoked as a result of previous learning or of gradients of generalization and discrimination and which is considered socially significant in the individual's society. The second definition is by Guttman (1950, p.51): An attitude is 'a

delimited totality of behaviour with respect to something.' For example, the attitude of a non-disabled person towards disabled persons could be considered to be the totality of acts performed by the non-disabled person with respect to disabled persons.

Attitude Scale: An attitude scale is a set of item statements concerning an attitudinal variable, designed to provide quantitative measures of respondents' relative positions along the particular attitudinal continuum or, in other words, designed to arrange the respondents according to their answers to a set of attitude items in a rank order from high to low, or from most to least favourable (cf. Anastasi; 1968, pp. 480 and 482; Guttman and Suchman, 1947).

Attitude Component: The ATDP, has two components here, that of content and that of intensity. Each attitude component is separate and is capable of measuring a different aspect of attitudes.

Attitude Content: The attitude content refers to the set of item statements of an attitude scale covering major aspects of a particular domain.

Attitude Intensity: The intensity of an attitude refers to the strength of feeling with which a respondent holds each content item statement, and is measured by a separate question after each content item on which a respondent may indicate how strongly he feels about that attitude item.

Religiosity: Defined as 'religiousness, religious feeling or sentiment,' and used by Jordan (1968, p.6) and here to denote 'orientation to religion,' it is measured by three questions: religious affiliation; the importance of religion; and the extent of adherence to the rules and regulations of the religion.

Physical Disability and Handicap: Hamilton (in Wright, 1960) provides

definitions which distinguish between these two terms:

'A disability is a condition of impairment, physical or mental, having an objective aspect that can usually be described by a physician ... A handicap is the cumulative result of the obstacles which disability interposes between the individual and his maximum functional level.' (p. 9).

This distinction has important implications. Not all disabilities as defined above are considered as handicaps. To know whether a disability is perceived as a handicap it is necessary to know what a person's 'maximum functional level' is, and this is culturally defined. If a physically disabled person is unable to fulfil culturally defined goals (i.e. his maximum functional level) because he is obstructed from doing so by his impairment and, if not frequently more so, by negative social attitudes which impose upon the person social disadvantages (i.e. the cumulative result of the obstacles which disability interposes) then he may be said to be also handicapped. While this useful, albeit technical, distinction will be adhered to in this study, many authors and professional personnel interchange the two terms synonymously and it is doubtful whether or not the distinction is appreciated by and meaningful or significant to the laity. Unless otherwise stated this study pertains to persons who are obviously physically or bodily disabled in some way. Pure sensory and mental disabilities are not the main issue (see face sheet of ATDP in Appendix A-2).

CHAPTER 2.

REVIEW OF EMPIRICAL RESEARCH AND RELEVANT THEORY.

Review of Attitudinal Research Towards Physical Disability.

One of the earliest studies on attitudes towards physically disabled persons is that by Strong (in Barker et al., 1946, p. 78). He asked 2,340 men between the ages of 20 and 60 whether they liked, disliked or were indifferent not only to the physically disabled but to persons with a variety of physical and behavioural characteristics. The men from whom responses were secured were in the following professions: engineering, law, ministry, medicine, education, writing, life insurance, selling and Y.M.C.A. work. Among other persons rated, the majority of subjects (52%) said that they were indifferent to disabled persons, 19% signified liking and 19% signified disliking. It is interesting, although the pure sensory disabilities are not of primary concern, that towards blind persons and deaf mutes, the majority of subjects (59% in both cases) were also indifferent, while 25% and 16% respectively expressed liking and 16% and 25% respectively expressed disliking. So it seems that here overt expressed attitudes towards physically disabled persons are generally not unfavourable and are often mildly favourable.

Winkler (in Barker et al., 1946, p. 83) tested the hypothesis that the unusual postures and movements of disabled persons are sufficient in themselves in evoking unconscious negative attitudes even though the persons are not consciously recognized as disabled. Action pictures of non-disabled and disabled children were presented to 200 physically normal children who were asked to judge them according to personality characteristics. The subjects were not told that the pictures consisted of both disabled and non-disabled children and consequently some of the former were not consciously recognized

as being disabled. Of the pictures of non-disabled children, 46% were rated unfavourable, while those of disabled children who were not recognized as disabled, 60% were rated unfavourable. This suggests that deeper un verbalized or covert attitudes may frequently be unfavourable. Further investigation would be useful in classifying the nature of un verbalized attitudes.

Mussen and Barker (1944) have reported a study of verbally expressed attitudes towards physically disabled persons. Thurstone-type rating scales were prepared for 24 personality characteristics and then administered to 117 students at Stanford University. Each student was asked to rate not only disabled persons but also his ideal person. The following descriptive phrases of the 24 personality characteristics fell nearest to the median disabled ratings:

- 'Conscientiousness: Tries harder than most.
- Self-reliance: Tendency to have more than average ...
- Kindness: More kind than average.
- Emotional restraint: Tendency to be reserved; seldom lets the world know his feelings.
- Persistence: Quite persistent; gives up only after definite proof of impossibility.
- Mental alertness: Intelligent; more alert than average.
- Originality: Tends to be more creative than average.
- Religiousness: Tendency to be more religious than most people.
- Impulsiveness: Inclined to ponder possible results of behavior.
- Unselfishness: Marked tendency to be unselfish; altruistic.
- Friendliness: Average...
- Trustworthiness: Average ...
- Disposition: Average; for the most part moderately cheerful.
- Tolerance: Average ...
- Courage: Average ...
- Self-pity: Average ...
- Social poise and tact: Average ability and interest in getting along with others.
- Vitality: Average ...
- Self-confidence: Average ...
- Submissiveness: Average ...

Realism: Given to reverie occasionally.
 Aggressiveness: Tendency to be mild:
 gentle in approach to people.
 Social adaptability: Finds it somewhat
 difficult to adjust to new situations.
 Sensitiveness: More sensitive than
 average' (Mussen & Barker, 1944, p.352-
 353).

According to these results the subjects believed that disabled persons tend to have behavior characteristics that differentiate them from non-disabled persons in both favourable and unfavourable ways. The subjects believed that disabled persons differ from the average in a favourable direction on ten characteristics, that they are near the average on ten characteristics, and that they differ from the average in an unfavourable direction on four characteristics. Thus there were more favourably expressed attitudes towards the disabled than unfavourable ones. There also appeared to be a generalized attitude or bias towards disabled persons; some subjects rated disabled persons very favourably on all the scales, and others rated them very unfavourably on all the scales. However, Mussen & Barker caution us that their findings must be interpreted in the light of the fact that they have dealt only with overt verbal expressions of attitudes in a restricted cultural milieu.

A small replication study of Mussen & Barker was conducted by this researcher at the University of Cape Town in April/May, 1974. Rating scales on 23 of the same 24 personality characteristics ('realism' was inadvertently omitted) with an extra one, 'sexual interest,' added, making 24 characteristics were administered to 30 first year Industrial Sociology students. Of these 17 (56.7%) returned their completed forms. Analysis of the results showed that the subjects believed that disabled persons differ from the average in a favourable direction on fourteen characteristics, that they are near

the average on five characteristics, and that they differ from the average in an unfavourable direction on five characteristics. Looking at Mussen & Barker's quoted results above, of their ten favourable characteristics, nine were found to be favourable, one average (emotional restraint), thus falling away, and five more were added being favourable (friendliness, trustworthiness, tolerance, courage and aggressiveness) making fourteen favourable characteristics. Of their ten average characteristics, four were found to be average, four favourable (friendliness, trustworthiness, tolerance and courage) and two unfavourable (social poise and tact and self-confidence) thus falling away, and one more was added being average (emotional restraint) making five average characteristics. Of their four unfavourable characteristics, two were found to be unfavourable, one favourable (aggressiveness) thus falling away, and two more were added being unfavourable (social poise and tact and self-confidence) making, with the unfavourable rated sexual interest, five unfavourable characteristics. Thus while disabled persons were rated favourably on four more personality characteristics, they were rated unfavourably on one more personality characteristic. A tentative conclusion seems to be that disabled persons are increasingly being evaluated in a more favourable light.

Ray (in Wright, 1960, pp. 51-52) conducted an experiment in which high school students were presented with six photographs of college boys and required to rank them in order according to a number of behaviour and personality characteristics. Half of the subjects received one photograph of a college boy in a wheelchair and five photographs of 'normal-looking' college boys. The other half received the same photographs, only here the wheelchair was obliterated. In comparison with the physically normal looking college

boys, the boy in the wheelchair, i.e. with the wheelchair apparent, was judged to be more conscientiousness, to obtain better grades, to be a better friend, to be more even-tempered, to be more religious, to feel more inferior, to like parties less, and to be more unhappy.

Since 1960 studies of attitudes towards the disabled have become more numerous and in general, more reliable. Many have been aided by the development of a scale to measure the attitudes towards physically disabled persons by Yuker, Block and Campbell (1960). Since the Attitudes Towards Disabled Persons Scale (ATDP) forms the bases of a number of studies, including this one, it is necessary to discuss it in some detail. The ATDP was designed to serve a dual purpose; to measure the attitudes of physically normal persons towards disabled persons, that is, acceptance of or prejudice against disabled persons, and to measure the attitudes of disabled persons towards themselves, that is, acceptance or rejection of themselves and their disabilities. It is a Likert-type scale consisting of 20 statements to each of which subjects can express their degree of agreement or disagreement on a six-point scoring scale (+3 to -3) from which a single total score is derived. Each statement suggests that disabled persons are either the same as or different from non-disabled persons. Two aspects of this same-different problem are covered by the statements. About half of the statements are formulated to bring out similarities or differences in 'personality' characteristics, while the rest suggest that disabled persons need or do not need 'special treatment.'

A test-retest reliability of the ATDP for a sample of 132 disabled employees yielded a coefficient of .67, while a group

of 76 non-disabled Hofstra College students showed a test-retest reliability coefficient of .70. The split-half reliability coefficient for 248 disabled employees was .76 and for 170 non-disabled students it was .78. Yuker et al. (1960, 1966) consider these estimates to be adequate in view of the homogeneity of the populations tested and the comparative shortness of the scale.

Predictable interrelationships between ATDP scores¹ and other measures of behaviour was the approach selected to examine the validity of the ATDP. With a sample of disabled employees most of the predictions made were substantiated and this, according to Yuker et al. (1960) indicated the scale's validity. The data revealed a positive relationship between high ATDP scores and females, as compared with males, verbal intelligence, job satisfaction and work performance; a negative relationship between high ATDP scores and age, anxiety and absenteeism; and no relationship between the ATDP and education, mental status, 'lateness,' as well as certain variables related to disability and hospitalization period (cf. also Yuker et al., 1962). In generalizing these results it should be noted that the sample consisted of employees at Abilities, Inc., a division of Human Resources Foundation, employees who may or may not possess the characteristics of disabled persons in general. In fact the results obtained by Smits (1964) are not in accord with the results obtained by Yuker et al. (1960, 1962) concerning the absence of a relationship between the extent of disability and self-acceptance as measured by the ATDP. One of Smits' aims was to investigate the effect of the obviousness and severity of physical

1. Unless otherwise stated, high ATDP scores indicate positive or favourable attitudes and low ATDP scores indicate negative or unfavourable attitudes.

disability on the self-concept and self-acceptance of 125 male and 76 female disabled students attending 'normal' schools in St. Louis, Missouri. These 201 subjects were classed according to their disabilities into 'obvious' or 'subtle', 'severe' or 'mild' sub-groups and were administered a scale to elicit self-concept and self-acceptance scores. The findings which are of interest here are

'The mean self-concept score of those adolescents with mild physical disabilities is significantly higher than the mean self-concept score of those adolescents with severe physical disabilities ...

Severely disabled female adolescents have significantly lower self-concept scores than mildly disabled female adolescents.

Severely disabled female adolescents have significantly lower self-acceptance scores than both severely disabled male adolescents and mildly disabled female adolescents' (Smits, 1964, p.1325).

Returning to Yuker et al.'s study of 1960, with a sample of non-disabled Hofstra College students, all the predictions were substantiated. Firstly, they scored lower on the ATDP than the disabled persons (difference between means being significant) probably because the latter accept 'disability' and adjust to it more easily than the non-disabled persons. Secondly, scores on the ATDP were positively related to the amount of contact that the non-disabled person had had with the disabled person, the nature of the contact, i.e. whether it was enjoyable or not, being immaterial. Thirdly, as was the case with disabled females, non-disabled females obtained higher ATDP scores than non-disabled males. Fourthly, the students were given Edwards' (1957) Social Desirability Scale with the ATDP to test whether they were 'putting up a good front' and merely responding with socially more desirable or acceptable attitudes. The result indicated that the ATDP does

not significantly measure social desirability.

This last finding is somewhat contrary to that of Feinberg (1966) who likewise studied the influence of social desirability on measured attitudes towards the disabled although Feinberg used the Social Desirability Scale of Crowne and Marlowe (1964) which leads to conclusions slightly different from those of Edwards (1957). The point both make, however, is that 'social desirability' is a biasing variable.

Feinberg's sample of 157 male and 123 female undergraduate college students (mean age 22.43 years) were administered the Crowne and Marlowe scale on the basis of which they were divided into high, medium and low social desirability subgroups. They were also given three attitude scales one of which was the ATDP. Social Desirability was found to significantly influence responses to each of the attitude instruments. This influence would be modified with changes in 'background and focal stimuli.' Firstly,

'significant differences in responses to the ATDP ... were found between subjects having high social desirability needs who were exposed to high evaluative test conditions and subjects having high social desirability needs who were exposed to low evaluative test conditions' (Feinberg, 1966, p. 1926).

And secondly,

'significant differences in the homogeneity of attitudes measured on the ATDP ... were found between subjects exposed to high evaluative test conditions and subjects exposed to low evaluative test conditions' (Feinberg, 1966, p. 1926).

Once again it must be recognized that students were used as subjects and it is debatable whether they constitute a representative sample of non-disabled persons. However, Yuker et al. (1960, 1966) maintain that, although additional developments of the scale are needed, and in fact warranted by the available evidence, the

ATDP is both reliable and valid and sufficiently well developed for use with either disabled or non-disabled persons.

Siller (in McDaniel, 1969, p.24 ff.) administered the ATDP to samples of college, high school and junior high school students. The attitudes of the last two groups towards disabled persons were pretty much the same while college students obtained comparatively high scores, i.e. they were more accepting in their attitudes towards disabled persons than were high school and junior high school students. Females were found to have a more favourable attitude towards the disabled than men. In general the most favourable attitudes were towards the least visible and least functionally handicapping disabilities.

A similar study was conducted by Siller and Chipman (1964) also using samples of college, high school and junior high school students as well as 75 female adults all from the New York City area. The respondents were almost entirely white and mostly from the middle socio-economic status class. The college students and female adults were required to fill in a Social Distance Scale (SDS) suitably modified for testing attitudes towards disabled persons.

'The SDS requires the subject to check the closest social relationship he would be willing to have with persons with ... (each of) eight handicaps, along a seven-point continuum of intimacy from "resident of another country" to "husband or wife" (Siller and Chipman, 1964, p.833).

The basic data revealed 'only the most trivial relationship' between sex and ATDP scores. Thus females did not score significantly higher than males. There was also no relationship between age and ATDP scores. We have seen that Yuker et al. (1960) had found a positive relationship between the ATDP and contact with the

2. The 'eight handicaps' were amputee, paralysis, cerebral palsy, body deformation, muscular dystrophy, deafness, blindness and skin disorders.

disabled. Now Arnholter (1962) using the ATDP found that the staff and professional workers of the Indianapolis Goodwill Industries Sheltered Workshop and Rehabilitation Center showed more acceptance of disabled persons than the staffs of the competitive industries. However the disabled workers at Goodwill Industries showed the least acceptance of both non-disabled staff and workers at Goodwill and competitive industries. Bell (1962) also argued that since Yuker et al. (1960) had found that non-disabled college students who had had 'close personal contact' with disabled persons obtained significantly higher ATDP scores than non-disabled students who had had no such contact then it should follow that

' ... rehabilitation workers, who are associated with disabled people much of their waking hours, would score significantly higher than a group of other hospital employees who do not have "close personal contact" with the disabled' (Bell, 1962, p.184).

The subjects who received the ATDP were divided into three groups: Group A, 40 rehabilitation workers; Group B, 30 hospital employees who only either had a family member or a close personal friend who was disabled; and Group C, 40 hospital workers who only either knew a disabled person as a mere acquaintance or not at all. The hypothesis was not supported by the results and Bell consequently suggested that

' ... at the present time (i.e. 1962) we can safely say that the ATDP scale provides a measure of the attitude that the physically disabled differ in certain ways from the general population than that the scale measures "degree of acceptance" of the handicapped' (p. 185).

Siller and Chipman's (1964) data indicated 'only trivial correlations' between experience with disabled persons and ATDP which led them to conclude that

' regardless of the reasons, ... it would seem that experience with the handicapped is at best only

slightly related to ATDP scores' (P. 834).

Applying a Spearman-Brown split half reliability test, correlations of .85, .83, and .75 for female adults, college and high school students respectively were obtained which are higher than those obtained by Yuker et al. (1960).

Le Compte and Le Compte (1966) compared the ratings of Turkish students on translated versions of the SDS used by Siller and Chipman (1964). In Turkey, begging is an accepted way of life for the poor and the disabled. The disabled person's inferior social status is more or less institutionalized and is thus in contrast to the active upgrading activities of disabled persons in America. Moreover, Islamic philosophy teaches all Moslems to accept their decreed fate and not to attempt a change. These considerations led Le Compte and Le Compte to hypothesize greater non-acceptance of disabled persons on the part of Turkish students than on the part of Siller and Chipman's American students.

The scales used were the ATDP and the SDS. Of the eight disability categories,³ muscular dystrophy was found, on pre-testing, not to be well known, so it was omitted from the list. As far as was possible the 212 students at the Gazi Institute in Ankara were selected to match the American subject sample.

As had been the case with Siller and Chipman, the data here revealed no significant differences in mean ATDP scores and SDS scores between males and females. Likewise personal experience was not found to be a factor influencing the directions of attitudes. Comparison of sample means of total ATDP scores showed that the American subjects expressed significantly more favourable attitudes

3. See note 2.

towards disabled persons than did the Turkish subjects. Now both teams of investigators also used a third scale, the Feeling Check List (FCL) which requires subjects

'... to check the feelings inspired in him by persons with each of eight disabilities, along a seven-point scale ranging from repulsion to affection' (Siller and Chipman 1964, p.833).

On the FCL Turkish subjects scored significantly higher - had greater positive feelings - than the American subjects, while on the SDS the latter scored significantly higher - expressed less social distances - than the Turkish subjects. Le Compte and Le Compte tentatively suggest that these findings may be due to the relatively more superficial, more casual and less intense social contacts of Americans with their fellow men.

In the first of a series of five related studies, Richardson, Goodman, Hastorf and Dornbusch (1961) report a preferential order of children when they were asked to rank pictures of children with various physical disabilities. Working on the suggested evidence that judgments of others are strongly influenced by their perceived physical characteristics and appearance, Richardson et al. asked children to give a preference ranking of a standard set of drawings of children of their own sex, who differed only with respect to physical disability. The subjects from New York, Montana and California were 6, 10 and 11 year olds, Black and White boys and girls from different social and cultural backgrounds. About 159 were physically disabled. Two hypotheses were tested.

'1. The rank order of preference for pictured children with various types of visible physical handicaps and without a handicap will be culturally uniform. Children of diverse backgrounds will give the same rankings.

2. The hypothesized rank order of preference will be:

- Rank 1 - A child with no physical handicap (drawing A).
- Rank 2 - A child with crutches and a brace on the left leg (drawing L).
- Rank 3 - A child sitting in a wheelchair with a blanket covering both legs (drawing W).
- Rank 4 - A child with the left hand missing (drawing H).
- Rank 5 - A child with a facial disfigurement on the left side of the mouth (drawing F).
- Rank 6 - An obese child (drawing O)'

(Richardson et al., 1961, p.242).

The results supported the first hypothesis of cultural uniformity among 10 and 11 year old children in ranking various disabilities. Boys and girls, disabled and non-disabled, Black and White, urban and rural, low, medium and upper, all these sub-groups gave uniform rankings. The second hypothesis was also supported, except that one race group - the Puerto Ricans - reversed the rank order of drawings H and W. Analysis of sex difference indicated that girls liked the children with social handicaps (drawings F and O) less than boys, while boys liked children with functional handicaps (drawings L, W and H) less than girls. From the hierarchy of preference it seems that functional handicaps are not the least liked. Richardson et al. put forward the explanation that the face is of primary importance in an initial assessment of another person. Liking seems to increase the further away the disability is from the face. Facial disfigurement was ranked second lowest while obesity which also affects facial appearance to some degree was ranked least.

Richardson et al. pose the question as to how this preferential ranking could have been learned and suggests an explanation in terms of a 'deprecatory evaluation of persons with physical disabilities' (P. 246). This problem is taken up by Goodman,

Dornbusch, Richardson and Hastorf (1963) who maintain that there is an implicit widespread cultural value 'which relates to preferential selection of different physical handicaps' (P. 430).⁴ Since

'children are not taught explicitly that a child with one kind of disability is more likeable than a child with another kind of disability ... these values are likely to be implicit and are learned in the socialization process largely in the absence of first-hand experience' (Goodman et al., 1963, p. 429).

Through the process of socialization the child is exposed to group norms and values communicated largely through visible behaviour patterns and thus he internalizes these norms and values. From the fact that adults are largely responsible for the socialization of the young, Goodman et al. hypothesized that adults would report the same rank order of preference for drawings of children with various types of visible disabilities and without a disability as the 10 and 11 year old children expressed in Richardson et al's (1961) study. The subjects consisted of 72 male and female adults concerned with the rehabilitation of the physically disabled, for instance, nurses, physical and occupational therapists, physicians, psychologists, and social workers. They were asked to rank the same set of six drawings as were given to the children. As before subjects were shown drawings only of children of their own sex. The results confirmed the hypothesis and revealed an identical rank order of preferences (see page 24). That this is so for persons engaged in rehabilitation of the physically handicapped evinces

'the pervasiveness of these culturally acquired values even in individuals who are medically, socially and psychologically sophisticated about physical disabilities' (Goodman et al., 1963, p. 431).

4. Although they refer to this cultural value as being 'in our society,' that is, in America, presumably it may be present in most Western societies and even in most societies.

This suggested culturally uniformity in the perception of physical disabilities was examined in terms of two instruments by Matthews and Westie (1966). A sample of 144 high school students were given the two instruments; a set of pictures similar to the ones used by Richardson et al. (1961) and a seven-point Social Distance Scale. The Social Distance Scale used by Matthews and Westie for their study consisted of the following:

1. Would exclude this type of person from my school.
2. Would be willing to have this type of person in my school.
3. Would be willing to have this type of person in the same club with me.
4. Would be willing to have this type of person as a friend.
5. Would be willing to date or double date with this person.
6. Would be willing to have this type of person as my sister or brother.
7. Would be willing to marry or have my brother marry this type of person' (p. 852).

The subjects were first given the set of pictures with the Social Distance Scale and asked to record the reaction to each picture of a child on the scale and then were later given the same pictures without the scale and requested to rank them from most liked to least liked.

The two hypotheses being tested were: Students will rank the various types of physical disabilities similarly on both the social distance scale and the rank order preference of pictures; and these rankings will be similar to the culturally uniform rankings reported in the earlier two studies. The first hypothesis was not confirmed while only the ranking of types of physical disabilities on the Social Distance Scale was similar to the hypothesized ranking with only two adjacent ranks reversed. Interpreting the mean rank of

each picture for the two instruments, Matthews and Westie suggest that the Social Distance Scale may be capable of making finer distinctions among pictures than the pictorial ranking method, which seems to lack 'subtlety.'

'That is, many subjects may be reluctant to make invidious distinctions if they feel it is not just or proper to do so. The use of social distance scales seems to make this reaction less likely and therefore may produce more complete and perhaps more valid results' (Matthews and Westie, 1966, p. 854).

Apparently Richardson and Royce (1968) were not discouraged that Matthews and Westie obtained results for the rank ordering of pictures contrary to the suggested preference pattern of Richardson et al. (1961) and Goodman et al. (1963), for they used the same set of six pictures and the same method of preferential ranking as the three above studies had in order to determine the relative importance of physical disability and skin colour in children's preferences for other children.

The subjects were 298 boys and 589 girls, 10 - 12 year olds, attending a New York summer camp. They were all of the lower income group and were White, Negro and Puerto Rican. Subjects were randomly divided into four groups. Group 1 was administered six pictures of White children; group 2 received the identical pictures but of Coloured children. They then ranked the pictures in order of preference. Race was not found to be a factor in ranking the most liked and least liked pictures. Now group 3 received the above determined most and least liked pictures as Coloured children and the other four pictures as White, while group 4 received the most and least liked pictures as White children and the other four pictures as Coloured.

For groups 1 and 2 when skin colour was held constant,

the same preferential ranking was found as that by Richardson et al. and Goodman et al., with the non-disabled child the most liked irrespective of colour. For groups 3 and 4 skin colour was also found not to be influential in ranking the pictures. In short, physical disability turned out to be a stronger factor in determining a preferential order of pictures than skin colour and to such an extent that it largely masked preferences based on colour. As a possible explanation Richardson and Royce put forward an interesting proposition.

'The dominance of physical disability in the children's rankings may be due in part to their lack of first-hand experience in knowing handicap as compared with coloured children.'
(p. 497).

The fifth related study is by Richardson (1970) who also used the same set of pictures in order to study certain questions such as: How early in the life of a child does a consistent attitude or value towards disability become manifest? Does this attitude or value remain stable at different age levels or does it change with age, and are there sex differences in the development of this attitude or value?

Richardson's subjects consisted of 530 male and 513 female children and students ranging from kindergarten to senior high school, that is, from ages five to eighteen. Adults subjects were 87 fathers and 155 mothers. They were all given the pictures and asked to rank them in preferential order as had been done in the previous studies.

From the results one sees that, with the exception of kindergarten, all the subjects liked the child without a handicap more than any of the handicapped children. Moreover, from grade 2 onwards, females liked the non-handicapped child more than the

males. The child with a leg brace and crutches (L) and the child in a wheelchair (W) became more liked as the age of subjects increased whereas the child without a left hand (H) and the child with a facial disfigurement (F) became the least liked. On the average the obese child (O) was the least liked by males and females. Richardson calls L and W 'functional handicaps' and H and F 'cosmetic handicaps' and draws attention to the tendency for the older subjects to like L and W better than H and F. This author considers H to be equally, if not more so, a functional handicap than a cosmetic one. However, in general the children's preferences shift in an orderly fashion at different ages and with increasing they come closer to those of their parents so that when the children are in senior high school their preferences are almost identical to those of their parents. Females exhibit these shifts at an earlier age than do males.

'This ordiliness in preference shifts by age provides additional evidence that the preferences reflect widely held learned values towards disability' (Richardson, 1970, p. 211).

The above findings, that a picture of a child without a disability elicits more positive attitudes than any of the pictures of disabled children seems fairly conclusive. Two further studies add yet more confirming evidence. Centers and Centers (1963) were concerned with peer group attitudes towards amputee children. A 17-item questionnaire on attitudes about appearance, social relationships, and popularity was administered to 836 school pupils ranging in age from 5 to 12 years. Of the total 28 school classes, 14 had a pupil with 'upper extremity amputations' while the other 14 had all non-disabled pupils. Demographic variables of the subjects were controlled as much as possible. The results showed a significant difference between the mean of the 'amputee group' (-6) and the 'non-amputee group' (+2) confirming the hypothesis that

peer group children express more negative attitudes towards amputee classmates than towards non-amputee classmates. In all the classes, amputee children were rated as the saddest, least liked, not nice looking and the least fun to play with.

It is Centers and Centers conviction that these negative attitudes are perceived by the amputee child.

'Such a child becomes aware that the difference in his body precipitates attitudes and possibly behaviour toward him which are different from those toward other children' (Centers and Centers, 1963, p. 131).

In reaction, the child may withdraw or display aggression or else try to deny his disability with ensuing frustrations and tensions in coping unrealistically with his disability. What is then important is that the attitude of peers, as well as those of the wider social group

'... should be considered in the introduction of the amputee child (and other disabled children) into the school group. It is necessary for the parent and the teacher not only to prepare the amputee for the questions and stares of his peers, but for other manifestations of rejecting attitudes' (Centers and Centers, 1963, p. 132. Brackets added).

As part of an investigation by Smits (1964) on the ways of disabled persons are perceived by others, 201 disabled adolescents were rated by classmates. Smits found that physically disabled adolescents were rated significantly lower by their classmates than were physically normal adolescents by their classmates. Another finding was that 'obviously' disabled adolescents received more extreme ratings from their classmates than 'subtly' disabled adolescents received.

In a somewhat slightly different approach on the attitudes towards differently disabled persons, Whiteman and Lukhoff

(1965) examined the relationships between attitudes towards blindness and blind persons and towards other physical disabilities and physically disabled persons. In the first experiment, 97 first-year students at the New York School of Social Work received two questionnaires each containing six attitudinal indices; competence, emotional attributes, personal interaction, community interaction non-protectiveness, and conception of disability. Two-thirds of the subjects received the questionnaire dealing with blindness and one-third received the questionnaire dealing with physical disabilities. Both contained the six indices. It was only the last index, testing the conception of blindness and conception of physical disability, which significantly differentiated the two groups, with blindness assessed more severe than physical (motoric) disabilities. Since the index of conception deals mainly with attitudes towards blindness, as compared with the other five indices dealing mainly with attitudes towards blind persons, Whiteman and Lukoff suggested that there may be a distinction between the attitudes towards blindness and attitudes towards blind persons. The second experiment found this to be so, with blind persons rated more favourably than blindness. This author suggests that this may be equally true for physical disabilities and physically disabled persons, the latter being more favourably perceived than the former.

In the third and last experiment, Whiteman and Lukoff tested the non-significance of the other five indices obtained in the first experiment, that is, that there may be little difference between the attitudes towards blind persons and the attitudes towards physically disabled persons. The results revealed no significant differences between attitudes towards blind persons and physically disabled persons. Support was also found for the first

experiment in that blindness as compared with physical disabilities was seen as significantly more severe, destructive and experientially unique.

Whiteman and Lukoff raise three questions concerning their results. Firstly, the question of the generalization of the findings beyond a social-work student population. There is the possibility that more favourable attitudes are confined to 'the wise',⁵ or to those who

'.. are on their guard against negative evaluations of people, when based on the limited information transmitted in the single quality of being blind or physically handicapped' (Whiteman and Lukoff, 1965, p. 145).

Secondly, they asked whether the results show the existence of a response set, or a tendency (conscious or unconscious) not to say 'bad things' about people as compared to the concept of disability.

'One possibility is that the reaction to people having a given attribute more effectively conjures up new and modifying characteristics that are not suggested by the attribute itself ... Indeed, a major function of abstractions ... may be the stripping away of the auxilliary connotations and the focusing of attention upon the concept per se' (Whiteman and Lukoff, 1965, p. 144).

This is why 'physical handicaps' may suggest unpleasantness, hardships, obstructions to 'normal social life,' while 'physically handicapped persons' may suggest competence, persistence, ambitiousness, etc.

5. The 'wise' are 'persons who are normal but whose special situation has made them intimately privy to the secret life of the stigmatized individual and sympathetic with it ...' Among the wise number professional rehabilitation workers, nurses, therapists, family, close friends, etc. (Cf. Goffman, 1968, p. 41, ff.)

Thirdly, the unfavourable reaction to blindness as compared to physical disabilities may be a function of the specificity of the former as compared to the generality of the latter.

Now there is one study which touches upon Whiteman and Lukoff's second question and another which deals with their third question. Jaffe (1967) maintains that the variety of stimuli used to elicit expressions of attitudes towards disabled persons, such as photographs, written descriptions, labels or terms, etc., all have certain limitations. His study aimed to provide information on attitudes towards disabled persons based on written descriptions or sketches of these persons as compared with attitudes based merely on labels or terms. The three labels were 'amputees,' 'mentally retarded,' and 'former mental patients.' The three written sketches described the person as having one of the three disabilities, e.g. 'he had a leg amputated several years ago and walks with an artificial leg,' but is 'functioning adequately,' i.e. he works, is married, expecting his first child, is neat of appearance, gets along with others, etc. The measure of attitudes was 22 pairs of opposite adjectives having a seven-point continuum, e.g. reliable-unreliable, self-reliant - dependent, etc. Approximately one-quarter of 126 senior high school students of Long Island evaluated the sketch of the non-disabled person as well as the three labels on the 22 pairs of adjectives, one-quarter the sketch of the amputee, one-quarter the sketch of the mentally retarded person, and one-quarter the sketch of the former mental patient. According to the results, the sketches of disabled persons were significantly more favourably evaluated than the labels or terms of disabled persons. Jaffe suggests that this may be due 'primarily' to the sketched person's relatively adequate functioning.

In an earlier study, Jaffe (1965) used the same three written sketches plus a fourth one described in the identical manner but as not having any disability. The subjects here were 477, high school students in New York and New Jersey. Contrary to the hypothesis, the amputee was the most favourably evaluated person. Data relating to the respondents' sex revealed that females rated each stimulus person more favourably than males. Data relating to contact revealed that contact with each disabled group tended to produce more favourable attitudes, although this was significant only with mentally retarded.

In conclusion, Jaffe (1967) makes the point that

'Perhaps even for existing public attitudes, the anticipated degree and extent of negative attitudes towards the disabled may not be as great as some studies using labels or terms suggest ... The greater amount of information in the sketch, and the presentation of this disabled person as an individual, may have contributed to the more favourable evaluations and reduced negative stereotyping' (p. 559).

The study which focuses upon Whiteman and Lukoff's (1965) third question (see page 33) and also continues the research of Richardson et al. (1961) and the other related studies is the one by Tringo (1970a, 1970b) who investigated the hierarchy of preference towards various groups of disabled persons. Specifically four hypotheses were tested:

- '(1) A hierarchy of preference exists wherein the relative position of a specific disability is consistently established.
- (2) Demographic variables of the non-disabled affect the extent of social distance expressed toward specific disability groups but do not affect the relative position of disability groups in the hierarchy.
- (3) Females express less social distance (more acceptance) toward disability groups than do males.

(4) An increase in education results in an increase in acceptance of disability groups' (Tringo, 1970b, p.296).

The measuring instrument used was a modified Bogardus Social Distance Scale consisting of nine categories. This Disability Social Distance Scale (DSDS) differs from the seven-category Social Distance Scale of Matthews and Westie (1966, quoted on pages 20-21), who had suggested that a social distance scale might be one of the best instruments in the investigation of attitudes towards disabled persons to produce valid results. Tringo's (1970b) nine-category DSDS is as follows:

'Would marry.
 Would accept as a close kin by marriage.
 Would have as a next door neighbour.
 Would accept as a close friend
 Would accept as a fellow employee.
 Would keep away from.
 Would keep in an institution.
 Would send out of my country.
 Would put to death' (p.297).

Subjects were requested to indicate the degree of closeness they would allow to a person with a listed disability by placing a number from 1 to 9 ('Would marry' - 9 'Would put to death' -1) next to each disability. Twenty-one disabilities were listed, the ones to which attention will be given being 'amputee,' 'cerebral palsy,' 'dwarf,' 'hunchback,' and 'paraplegic.' A total of 455 subjects, consisting of 183 males and 272 females from Connecticut, divided into 6 groups, participated. Group 1 was high school students, groups 2, 3, and 4 were undergraduates, group 5 was graduate students and group 6, rehabilitation workers.

When a t-test was applied to the group means on each of the 22 disability variables (21 disabilities scores plus the overall social distance score) no significant differences were found among groups 2 to 6, whereas group 1 was significantly different

from each of the other five groups whose results were thus pooled for comparison with group 1. Group 1 was significantly less accepting on each of the disability variables. Despite this significant difference a correlation coefficient between group 1 and groups 2 - 6 was very high ($r=.9470$) indicating a stable order of preference or hierarchy. In the disability hierarchy, a person with an ulcer was ranked first and second by groups 2-6 and group 1 respectively, while mental illness was ranked twenty-first (last) and twentieth by group 1 and groups 2-6 respectively. Group 1 and groups 2-6 respectively ranked amputee, eighth and sixth; paraplegic, fourteenth and thirteenth; dwarf, eleventh and sixteenth; cerebral palsy, thirteenth and fifteenth; and hunchback, fifteenth and seventeenth. A very general ranking pattern in the hierarchy with several exceptions was physically disabled, first, the sensory disabled, second, and the brain injured, third. The mean score for males on all 22 disability variables was higher than for females, i.e. females tended to be more accepting. On 13 disability variables (including the overall social distance score) the differences between male and female were significant, including cerebral palsy and paraplegic of the five disabilities focused on here. Despite this the correlation coefficient between the sexes was very high ($r=.9820$) indicating yet again a 'stable hierarchy of preference' towards the disability groups. In addition the fourth hypothesis was partly confirmed in that with an increase of education and age, there was an increase in acceptance of disability groups. Concerning the stable hierarchy of preference of both the two main groups and the sexes, Tringo (1970b) maintained that this

'... consistency of response ... indicated that the assumption of a stereotyped conception of

various disability groups is valid. The existence of the hierarchy and the stereotyped conception of various disability groups thus support the contention that prejudice exists toward the disabled' (p. 303).

Tringo, however, points out that this hierarchy needs further confirmation in the general population and that the type and extent of contact with disabled persons should also be ascertained. Further confirmation of this hierarchy of preference was indeed found by Harasymiw (1971) and Elsberry (1974). Harasymiw used an eight-item social distance scale modelled on Tringo's DSDS on 2106 non-disabled lay persons, rehabilitation professionals and disabled persons. The confirmatory evidence appears in the findings that these three subject groups expressed similar social distance hierarchies of 20 disability groups, and that regardless of age, those having more education were found to be more accepting of the disability groups.

Elsberry's (1974) study compared the attitudes towards persons with different physical disabilities as well as determined the relationship of attitude to several contact variables, a two-fold purpose which Tringo (1970b) had recommended. Using college students and the ATDP, Elsberry found that persons with certain disabilities elicited significantly more favourable attitudes than others; persons with facial scars were ranked most favourably and 'disabled persons' were ranked least favourably. Amputees (other than the general category of 'disabled persons') were evaluated more favourably than the blind, but there was no significant difference between amputees and the deaf, and the deaf and the blind. Elsberry thus concluded that the type of disability is an important determinant of the favourability of college students' attitudes

towards physically disabled persons. Concerning respondents' sex, there was no significant difference between the attitudes of males and females towards persons with different physical disabilities. Concerning the contact variables, the amount, proximity, length and choice of contact with persons having specific physical disabilities did not significantly relate to attitudes.

Brookfield (1970) used a Bogardus-type scale as well as an Osgood-type semantic differential measurement, as attitude measures towards six attitude stimuli: self, amputee, paraplegic, cardiac, ex-tubular, and 'average normal' person. The subjects were 38 non-disabled and 124 disabled, including the mentioned disabilities. All were employed males, aged 28-48 years.

Tests on Brookfield's four hypotheses with the Osgood-type scale revealed that: (1) Attitudes towards disabled persons were less favourable than attitudes towards non-disabled persons. (2) The disabled and the non-disabled did not differ in their attitudes towards self. (3) A subject's attitude towards self-related positively to his attitude towards a disabled person. This relationship was not significant for amputees and paraplegics. (4) A subject's attitude toward self related positively to his perception of the attitudes of others towards him. This relationship was not significant for amputees. Although all four hypotheses were in the predicted direction, only the second one was completely supported. Yet Brookfield suggested that different attitude scales may be measuring different dimensions of attitudes since with the Bogardus-type scale the only fully confirmed hypothesis was not confirmed in that the attitudes of disabled subjects were not always similar to those of non-disabled subjects. For instance, the disabled subjects expressed significantly more favourable attitudes towards a normal

person than towards a disabled person and in their perceived attitudes towards self than non-disabled subjects towards self.

Brookfield's suggestion seems to be substantiated not only by her results but also by those of Dixon (1973) who used the same attitude instruments. Using a semantic differential instrument Dixon obtained results contrary to those obtained by Brookfield on the social distance scale. He found that his disabled subjects tended to express lower self-evaluations than did the non-disabled subjects and that the disabled persons expressed generally more favourable attitudes towards disabled persons than did the non-disabled. It is not clear, however, whether the latter result was obtained on the semantic differential or the social distance scale. If they were found on the social distance scale they are still contradictory.

Dow (1965) has reported an investigation into the relationship between socio-economic position and reaction to disability. His hypothesis hinged on a number of assumptions, particularly these two:

'The lower classes, deprived of most ... (of the paths to economic success open to the upper and middle class) rely more heavily than the higher classes upon physical means to obtain success ... i.e. the importance attached to physique varies inversely with social class level.

The greater the importance attached to physique, the more severe the reaction to disability' (p. 40. Brackets added).

And hence Dow's hypothesis:

'There is a progressively more pessimistic and negative reaction to physical disability as one moves down the socio-economic ladder, and a progressively more optimistic and positive reaction to physical disability as one moves up' (p.40).

The subjects consisted of 58 children (mean age 10.8 years) in a convalescent and rehabilitation institution, and their parents. Thirty families were classified as middle class, and 28 as lower class. The hypothesis was tested in two different ways: Firstly, the 'intellectual reaction to disability' was determined by questionnaires to both children and parents, designed to tap their attitudes towards the subjective and objective aspects of physical disability; and secondly, the 'overt reaction to disability' was determined by interviewing one parent in each family who discussed the influence, meaning, etc., of the disability to the family. It is not necessary to analyse the rather involved and full results obtained from the questionnaires and interviews. What is important though, is that, in the first instance 'intellectual reactions' to disabilities was not found to be related to social class positions. Both upper and middle class families displayed

'... a uniformly positive pattern of attitudes toward disability and institutionalization' (Dow, 1965, p.50).

Likewise, in the second instance, 'overt reactions' to disabilities were found to be unrelated to social class positions. 'Overt reactions' or the actual behaviour patterns towards disability and institutionalization were defined as either balanced or extreme and were more a function of the number of children (including the disabled child) per family rather than social class.

What of the two assumptions upon which Dow based his hypothesis? These were re-examined by evaluating the emphasis on physique of both parents and children. The importance of physique was compared with the importance of personality, economics, and intellect. In the parental 'value system' the dominant ranking

pattern was personality first, intellect second, economics third, and physique of least importance. Only 8 of the 97 parents ranked physique in any position other than of least importance. In the disabled children's 'value system' the dominant ranking pattern was personality first, intellect second, physique third and economics as least important. Twenty-six children ranked physique in any position other than of third importance (12 ranked physique first, 11 second, and 3 last).

'In any event, neither the parents' nor the children's evaluation of the relative importance of physique was significantly related to social class position' (Dow, 1965, p. 60).

The opinion is well held that the prejudicial attitudes of the non-disabled majority towards their disabled fellow citizens places the latter in a minority status not very much unlike the status of the more commonly identified minority groups. Few studies have investigated physically disabled persons as a minority out-group or tested the validity that they do hold a minority status. One such study is that of Chesler (1965) whose purpose was to assess persons' attitudes towards a variety of ethnic, as well as nonethnic, e.g. disabled, minority groups. He cites literature showing that intolerance towards one minority group is usually accompanied by intolerance towards other minority groups. Now Chesler argues, that if ethnocentrism, that is, high esteem for one's own group and rejection of most other groups, is general in character, as the literature suggests, then physically disabled persons as an out-group should be subject to the same rejection and negative attitudes as are other minority groups. He thus states two hypotheses

'Individuals who exhibit ethnocentric attitudes toward one particular minority group, will express similar attitudes toward a variety of other out-groups ... (Secondly,) Individuals

who express ethnocentric attitudes toward various out-groups, will express similar attitudes toward physically disabled persons' (p. 879. Brackets added).

A 34 item Likert-type scale, the Intergroup Relations Scale (IRS) was developed by Chesler to measure ethnocentrism in terms of a person's attitude towards 13 religious, racial, social class, and nationality groups. Both the IRS and the ATDP were administered to 77 Hofstra students and 243 high school students attending a human relations conference. Chesler recognized that the high school students were thus probably atypical of the adolescent school population and more like the university students in vital respects. In fact, both groups' scores did not differ significantly on either scale. All four measures of ethnocentrism correlated positively with each other, thus confirming the first hypothesis, that is, persons who express ethnocentrism towards racial groups are also likely to express similar attitudes towards religious, nationality and social class groups, as well as to out-groups in general. The second hypothesis was also confirmed with subjects scoring high on the IRS indicating ethnocentrism and low on the ATDP indicating rejection of the disabled. In addition, two findings substantiated those of Yuker et al. (1960). Females and those who had had contact with the disabled scored significantly higher on the ATDP, indicating a greater acceptance of disabled persons, than males and those who had had no contact.

A second study concerning disabled persons as a minority group is that by Harasymiw (1971) who attempted

'to validate the concept that the handicapped person is viewed as a member of a minority group' (p. 2482).

Harasymiw administered an eight-item social distance scale modelled

on the Tringo Disability Social Distance Scale (1970b, see above p. 35) and the Bogardus Social Distance Scale to 2106 non-disabled lay persons, rehabilitation professionals and disabled persons who were all requested to rate 20 disability, 20 ethnic and 20 occupational groups. Support was found for the contention that, in terms of social distance, disability groups are seen in a similar way to ethnic minority groups in that there was a high correlation between attitudes towards disability groups and towards ethnic groups with almost half of the 20 disability groups eliciting more social distance than the least accepted ethnic group. In addition, all the disability groups were 'more stereotyped' than were the ethnic or occupational groups.

Jordan (1968) has conducted a cross-cultural study on a very large scale. Elaborate data analysis is one of the attributes of this colossal research. An in-depth analysis of Jordan's project is not necessary and only relevant fact and findings will be presented here. Hypotheses concerning disabled persons and education will be discussed. Hypotheses bearing no relation to disability will, of course, be omitted.

Attitudes towards education and towards disabled persons were examined in eleven nations: United States, Costa Rica, Columbia, Peru, England, Holland, France, Yugoslavia, Denmark, Japan and Belgium. The subjects (approximately 2493) were four 'occupational or interest groups': elementary and secondary teachers (E), managerial and executive personnel (M); white collar workers and labourers (L); and special educators and rehabilitation personnel (SER). The subjects were each administered a 20 item Attitudes Towards Education Scale and a modified ATDP scale, the primary

modification being a reduction of the response categories for each content item from six to four. Each scale had questions after each content item to measure the intensity with which that attitude was held. Three other questionnaires were also administered to record a number of independent variables such as personal values, contact, change orientation, institutional satisfaction, religiosity and several demographic variables.

Hypothesis 1 and 2 stated :

'Persons who score high in need for power and control over others or in need for recognition and achievement will tend to score (a) Low in progressive attitudes toward education, ⁶ (b) high on traditional attitudes toward education, ⁷ and (c) low (high ATDP scores) in positive attitudes toward disabled persons' (Jordan, 1968, p.34).

The hypothesis for 'high in need for power and control' and 'high ATDP scores, i.e. H-1c (the other hypotheses will be discussed with this notation) was not supported in any nation. The hypothesis for 'high in need for recognition and achievement' and 'high ATDP scores' (H-2c) was supported only in Columbia.

Hypothesis 3 stated:

'Persons who score high in the need to help others to be generous, will score (a) high in progressive attitudes toward education, (b) low in traditional attitudes toward education and (c) high (low ATDP scores) in positive attitudes toward disabled persons' (p. 35).

H-3c was supported only in the United States.

Hypothesis 4 stated:

'Women within and across nations will score higher than men in (a) the need to help others, (b) progressive attitudes toward education and (c)

6. 'Emphasizes the problem solving approach and de-emphasizes subject matter for its own sake. Equality and warmth rather than discipline are valued ...' (Jordan, 1968, P. 5).

7. 'Emphasizes subject matter for its own sake and discipline is considered important' (Jordan, 1968, p.5).

positive attitudes toward disabled persons'
(p.39).

H-4a was supported in all nations except in England, France and Denmark. It was not tested in Belgium. H-4c was supported only in the United States and Columbia, whereas across all the nations females scored significantly higher than males in positive attitudes towards disabled persons.

Hypothesis 5 stated:

'The more frequent the contact with education or disabled persons the higher will be the scores on the intensity statements of the (a) progressive attitudes toward education and (b) traditional attitudes toward education, and (c) ATDP scales regardless of the positiveness or negativeness of the attitude content' (p. 40).

H-5c was in this direction in nine nations, reaching significance in five of these nations. It was not tested in England, and was directionally opposite in the United States. This, supported by unconfirmed findings for H-5a and 5b led Jordan to suggest the hypothesized relationship between contact and intensity of attitudes may hold when the attitudinal object is a personal one such as disabled persons rather than a conceptual one such as education. One could postulate the concept 'disability' in the place of the concept 'education.' In fact, it will be remembered that Whiteman and Lukoff (1965) and Jaffe (1967) had found that students expressed more favourable attitudes towards disabled persons than towards the concept or label of disability without the additional variables of contact and intensity.

Hypothesis 6 stated:

'High frequency of contact with education or with disabled persons ⁸ will be associated with

8. 'Or with disabled persons' seems to have been omitted on page 43 through a printing error (cf. Jordan, 1968, p.22 and descriptive results, p.43).

favourable attitudes toward (a) progressive education, (b) traditional education, or (c) disabled persons if frequency is concurrent with (a) alternative rewarding opportunities and (b) enjoyment of the contact' (p. 43).

H-6c was supported in all ten nations. It was not tested in Costa Rica.

Hypothesis 7 stated:

'People who score high on change orientation will score (a) high on progressive attitudes toward education, (b) low on traditional attitudes toward education, and (c) high on positive attitudes toward disabled persons' (p. 46).

H-7c was supported in eight nations. In Columbia and Japan it was not confirmed and in Costa Rica it was not tested.

Hypothesis 8 stated:

'Persons who score high on satisfaction with the performance of designated social institutions will score (a) low on progressive education, (b) high on traditional education, and (c) low on positive attitudes toward disabled persons' (p. 48).

H-8C was supported in all ten nations. Costa Rica was omitted.

Hypothesis 9 stated:

'Persons who score high on religiosity will score (a) low on progressive education, (b) high on traditional education, and (c) low on positive attitudes toward the disabled' (p. 48).

All three parts of this hypothesis received only very limited support in the ten nations. Once again Costa Rica was omitted.

Hypothesis 10 stated:

'The SER group, within and across nations, will have more positive (i.e. low scores) towards disabled persons than will persons in other occupational groups' (p. 48).

This hypothesis was supported with varying degrees of significance in five nations and was significant across nations. ⁹

9. A few figures in Jordan's descriptive results of this hypothesis do not correspond with the figures from his tabulated results. The latter have been cited.

It was statistically significant in the opposite hypothesized direction in Peru and England. In Holland, Yugoslavia, Denmark and Belgium the hypothesis was not confirmed. In three nations (Peru, England and Yugoslavia) the M group was most positive toward the disabled; in two nations (Holland and Denmark) it was the L group; and in one nation (Belgium) it was the E group. Only in Peru and England was the SER group the least favourable; in Holland Japan group E was the least favourable; in the United States and Denmark group M was the least favourable; and in the remaining five nations, group L was the least favourable towards disabled persons. In addition it was found that females of the SER group had more positive attitudes than males of the SER group both within and across nations.

Hypothesis 15 stated :

'Attitudes toward (a) progressive education and toward (b) disabled persons will be more positive as one moves from low to high on the socio-economic-educational continuum of development ' (p. 63).

H-5b was partially supported by groups E and M while it was in this direction for the SER and L groups. According to Jordan this further supports the assertion that physically disabled persons are viewed more positively in developed nations.

This broad research by Jordan (1968) is the consequence of several doctoral studies which all used more or less the same variables, hypotheses and methodology, etc., as Jordan did. The investigators were part of a large research programme developed and supervised by Jordan at Michigan State University. The original research problem of studying cross-culturally the structure content and determinants of attitudes towards education and towards physically disabled persons already motivated fourteen doctoral dissertations prior to Jordan's cited publication. For instance, Felty (1966)

undertook research on the above in San Jose, Costa Rica; Friesen (1966) in Bogota, Columbia, Lima, Peru and the United States; Cessna (1967) in Japan; Dickie (1967) in Kansas; and Krieder (1967) in Belgium, Denmark, England, France, the Netherlands, and Yugoslavia. According to Jordan, more are underway.

Several studies have attempted to relate contact or familiarity with or knowledge of disabled persons to attitudes towards them, usually testing some other variable or variables at the same time. Webb (1964) investigated familiarity as well as perceptual modes in the social acceptance of physically disabled college students by physically normal University of Illinois students. Concerning perceptual modes, Webb devised the Speech, Appearance and Motion Questionnaire (SAMQ) as 'a measure of discrimination of disabled speech, appearance and motion.' Results indicated that patterns of disabled motion were rejected more than those of disabled speech and disabled appearance. Moreover, scores on the SAMQ were indirectly related to scores on the ATDP, as the measure of social acceptance in that students with non-discriminating SAMQ scores were more accepting of disabled persons than others with discriminating scores. Concerning perceptual modes, Webb devised the Speech, Appearance and Motion Questionnaire (SAMQ) as 'a measure of discrimination of disabled speech, appearance and motion.' Results indicated that patterns of disabled motion were rejected more than those of disabled speech and disabled appearance. Moreover, scores on the SAMQ were indirectly related to scores on the ATDP, as the measure of social acceptance in that students with non-discriminating SAMQ scores were more accepting of disabled persons than others with discriminating scores. Concerning familiarity, there was a direct increase in social acceptance with increasing familiarity with dis-

abled persons.

Knittel (1964) examined familiarity and certain demographic variables by comparing the attitudes towards disabled persons between children who had a physically disabled sibling and children who did not. The subjects were two matched groups of 30 male and 15 female school children, aged 5 to 17 years. Subjects of only the one group had a disabled sibling. Three attitude scales were used, one of which was the ATDP.

The results of comparisons between the two groups and subjects revealed that, firstly, with subjects who had a disabled sibling, the older the subjects the more favourable were the attitude scores, but with subjects who did not have a disabled sibling, the younger the subjects, the more favourable were the attitude scores. Secondly, subjects who had a disabled sibling, as compared to those who did not, responded more favourably to questions concerning a disabled person's social activities. Thirdly, no significant differences of attitudes towards disabled persons were found between sexes or with varying intelligence or according to the total number of siblings.

Genskow and Maglione (1965) have examined the relationships between familiarity with disability and dogmatism and the expressed attitudes of students towards the disabled. Three hypotheses were tested. First, the more familiar a group of persons are with disabled persons, the more positive will their attitudes be towards the disabled. Second, when questionnaires are administered by a disabled person to the group more familiar with disabled persons they will react more positively towards the disabled than they would when a non-disabled person administered the questionnaires and vice versa

for the less familiar group. Third, high dogmatism, i.e. highly intolerant, authoritarian behaviour, will be associated with negative attitudes towards disabled persons. Subjects were 111 students at Indiana and Illinois State Universities, the latter having an extensive programme for physically disabled students, the former not. By this criterion the Illinois subjects were designated the familiar group, F (although the actual amount of contact with disabled persons was not ascertained) and the Indiana subjects the unfamiliar group, U. The two questionnaires used were the ATDP, to measure attitudes towards disabled persons, and Rokeach's (1960) Dogmatism Scale (DS), to measure dogmatism. These were administered by persons posing as 'disabled' in a wheelchair and then as 'non-disabled' for each group.

It was found that group F (familiar with disabled persons) reported significantly more positive attitudes towards the disabled than did group U (unfamiliar with disabled persons). On the DS the two groups also differed significantly with group F less dogmatic. Differences between the two groups on the ATDP when administered by an 'able-bodied' person were significant only at the .15 level, whereas differences when administered by a wheelchair-bound person were highly significant ($p = .005$). However, the overall influence of an able-bodied versus wheelchair-bound administrator upon attitudes was so low, although in the hypothesized direction, that Genskow and Maglione tentatively rejected their second hypothesis. The third hypothesis was in the predicted direction, but the correlations between dogmatism and attitudes towards disabled persons were not significant, although group F reported a significantly less dogmatic, more open-minded approach.

Further research on the relationship between dogmatism and attitudes towards disabled persons may indeed reveal significant correlation since Tunick (1973) found a relationship between authoritarianism, religious and demographic variables and attitudes towards disabled persons. Specifically of his 105 non-disabled subjects those who held unfavourable attitudes towards disabled tended to be authoritarian, religiously orthodox, moderate church attenders, older, from a farm background, and had lived in the community for a longer period of time than persons with favourable attitudes. Although Tunick does not state whether the opposite is true for favourably disposed persons, presumably this is the case, a presumption gained partly from the only information given: that they tended to be low church attenders, from a non-farm background, and had a high level of formal education.

Palmerton (1968) is one of the researchers who worked under Jordan (1968) at Michigan State University. He narrowed his colleagues' field of study and only investigated the relationship of perceived amount and perceived nature of contact and amount of information or knowledge about disabled persons with the attitudes of college counselors towards physically disabled persons. For this purpose, four hypotheses were formulated, three of which are relevant here. They are similar to the ones quoted above in Jordan's (1968) study:

1. 'High frequency of contact with disabled persons would be positively related to more intense attitudes toward disabled persons.'
2. 'High frequency of contact with disabled persons, when combined with (a) enjoyment of the contact, (b) easy avoidance of the contact and (c) available alternative rewarding contacts, would be positively related to positive attitudes toward disabled persons.'
3. 'High amount of information or knowledge about

disabled persons would be positively related to positive attitudes toward disabled persons' (Palmerton, 1968, p.4828).

His sample consisted of 81 American college counselors who had received and returned instrument packets with self-administering directions, packets which consisted of the same measurement instruments used by Jordan (1968) and others. The 81 subjects represented a 75% response return.

When the hypotheses were tested, the first one was confirmed, the second was only conditionally confirmed in that high frequency of contact, enjoyment and alternative rewards did relate positively to positive attitudes towards disabled persons, but ease of avoidance related negatively at a significant level to positive attitudes towards disabled persons. The third hypothesis was not confirmed, the results revealing that instead a small negative relationship between information and positive attitudes. Palmerton suggests that the results of the third hypothesis may possibly indicate that the better informed counsellor, rather than having negative attitudes towards disabled persons, see the disabled as having special problems and unique needs. He therefore questions the ATDP's underlying assumptions of equating negative attitudes towards disabled persons with the view that they are 'different' from physically normal persons.

Now Higgs (1972) addressed himself to this problem by re-examining the relative roles of information level and degree of contact on attitudes towards disabled persons. His subjects included 134 secondary school students, 117 college undergraduates and 125 college counsellors and parents. Each subject was requested to complete the ATDP, a knowledge test about specific disabilities and a contact rating index. Contrary to Palmerton's (1968) finding a

direct relationship was found between amount of information and degree of contact and attitudes towards disabled persons for all three subject groups. Two other results revealed that the secondary school group possessed less information, a lower contact index and less positive attitudes towards physically disabled persons than the other groups and that females generally possessed more information, a higher contact index, and more positive attitudes than did males.

That concludes this section on empirical research into the attitudes towards physical disability. The review is extensive and in parts, coverage is full, but it is not exhaustive. Indeed this was not the purpose which was rather to present salient points of attitudinal research having some relevance and bearing on the subject matter of this study. Two notable features are that, firstly, several investigators arrive at the same result about the same problem, and secondly, this happy situation is short-lived, for soon one finds that there are equally as many investigators who study the same problem but reach different results. Sometimes the opposite forces are not so evenly arranged and it is two who confirm and one who refutes or whatever. In such cases of ambiguity, when no clear cut-and-dried situation exists, the best method in deciding to adopt one finding and not its converse, is to look at the particular researcher's theory, his methodology and his data analyses. But even then, choosing can be difficult and must await still further evidence. It has already been seen how different techniques, supposedly measuring the same dimensions of a specific problem, sometimes used by the same investigator, may possibly yield different results.

In summary, the following are the chief findings which emerged from the foregoing review. Findings which are in some way related are indicated thus through alphabetic sub-division:

- 1a. Disabled and non-disabled do not differ in their attitudes towards self (Brookfield, 1970).
- 1b. Disabled and non-disabled differ in their attitudes towards self (Brookfield, 1970; Dixon, 1973).
- 1c. Attitudes towards the non-disabled are more favourable than towards the disabled (Brookfield, 1970; Centers and Centers, 1963; Goodman et al. 1963; Matthews and Westie, 1966; Richardson, 1970; Richardson et al., 1961; Richardson and Royce, 1968; Smits, 1964).
- 1d. Attitudes towards the disabled are more favourable than towards the non-disabled (Dixon, 1973; Jaffe, 1965).
- 1e. Non-disabled persons score lower on the ATDP than disabled persons (Yuker et al., 1960).
- 1f. Disabled persons score lower on the ATDP than non-disabled persons (Arnholter, 1962).
- 1g. College students score higher on the ATDP than high and junior high school students (Higgs, 1972; Siller, 1963).
- 2a. There is a cultural uniformity in ranking various physical disabilities (Richardson et al., 1961; Richardson and Royce, 1968).
- 2b. There is an hierarchy of preference towards disability groups, that is, different physical disabilities elicit different attitudes towards them (Elsberry, 1974; Goodman et al., 1963; Harasymiw, 1971; Matthews and Westie, 1966; Richardson et al., 1961; Smits, 1964; Tringo, 1970a, 1970b; Whiteman and Lukoff, 1965).
- 2c. Disabled persons as compared to the label or concept of disability are more favourably evaluated (Jaffe, 1967; Whiteman and Lukoff, 1965).
- 2d. Patterns of disabled motion are more negatively evaluated than disabled speech and disabled appearance (Webb, 1964).
- 2e. For disabled persons, no relationship exists between ATDP scores and age at which the

person became disabled and the type and extent of disability (Yuker et al., 1960, 1962).

2f. Mildly disabled adolescents have a higher self-concept score than severely disabled adolescents (Smits, 1964).

3. Disabled persons with a low anxiety count score high on the ATDP (Yuker et al., 1960).

4a. There is a positive relationship between attitudes towards disabled persons and amount of contact or familiarity with them (Arnholter, 1962; Cessna, 1967; Chesler, 1965; Felty, 1966; Genskow and Maglione, 1965; Higgs, 1972; Jaffe, 1965; Jordan, 1968; Palmerton, 1968; Siller and Chipman, 1964; Webb, 1964; Yuker et al., 1960).

4b. There is no relationship between attitudes towards disabled persons and amount of contact with them (Bell, 1962; Dickie, 1967; Elsberry, 1974).

4c. There is a positive relationship between attitudes towards disabled persons and amount of information or knowledge about them (Felty, 1966; Higgs, 1972; Friesen 1966; Jordan 1968).

4d. There is no relationship between attitudes towards disabled persons and amount of information or knowledge about them (Palmerton, 1968).

5a. For non-disabled persons, there is no relationship between ATDP scores and age (Siller and Chipman, 1964).

5b. For non-disabled persons, there is a positive relationship between ATDP scores and age when age is linked with familiarity (Knittel, 1964).

5c. Non-disabled persons younger than average have more favourable attitudes towards disabled persons than those who are older (Knittel, 1964; Richardson, 1970; Tunick, 1973).

5d. Disabled persons younger than average have high scores on the ATDP (Yuker et al., 1960).

6a. Non-disabled females have more favourable attitudes towards disabled persons than non-disabled males (Chesler 1965; Dickie, 1967; Higgs, 1972; Jaffe, 1965; Jordan, 1968; Krieder, 1967; Richardson, 1970; Siller, 1963; Tringo, 1970b; Yuker et al., 1960).

6b. There is no difference in attitudes towards disabled persons between males and females (Elsberry, 1974; Knittel 1964; Le Compte and Le Compte, 1966; Siller and Chipman, 1964).

- 6c. Disabled females score higher on the ATDP than disabled males (Yuker et al., 1960).
- 6d. Severely disabled females have lower self-acceptance scores than severely disabled males or mildly disabled females (Smits, 1964).
- 7a. For non-disabled persons, there is a positive relationship between attitudes towards disabled persons and education, (Harasymiw, 1971; Tringo, 1970b; Tunick, 1973).
- 7b. For non-disabled persons, there is no difference among persons with varying intelligence and their attitudes towards disabled persons (Knittel, 1964).
- 7c. For disabled persons, no relationship exists between ATDP scores and education (Yuker et al., 1960).
- 8a. Physical disabilities elicit stronger negative reactions than the racial criterion of skin colour (Richardson and Royce, 1968).
- 8b. Persons who manifest a high rejection of minority outgroups also express rejection of disabled persons (Chesler, 1965).
- 8c. Persons who express high dogmatism also express negative attitudes towards the disabled (Genskow and Maglione, 1965; Tunick, 1973).
9. There is no relationship between attitudes towards the disabled and social class position. (Dow, 1965; Richardson et al., 1961).
10. Non-disabled persons high on religiosity score low on positive attitudes towards disabled persons (Jordan, 1968; Tunick, 1973).
11. For disabled persons, no relationship exists between ATDP scores and marital status (Yuker et al., 1960).
12. Disabled persons with high job satisfaction score high on the ATDP (Yuker et al., 1960).

Theoretical Foundations of the Study.

Heider's (1958) balance theory focuses upon the ways people view their relations with other people and with their environment. The analysis centers around the relationship of a person, p, to another person, o, or to an impersonal entity, x,

which may be a situation, an event, a thing, an idea, etc. When x denotes a personal entity, the letter q is substituted. Two types of relation, between p , o and x are distinguished; sentiment relations and unit relations. Sentiment refers to the way p feels about or evaluates o or x . Positive sentiment relations exist when p likes, approves, admires, etc., o or x . This is written plo or plx . Negative sentiment relations exist when p dislikes, rejects, derogates, etc. o or x . This is written $p-Lo$ or $p-Lx$. A unit comprises two separate entities perceived as belonging together in some special way - a unit relation. Conditions that may lead to unit relations are such unit-forming factors as similarity, membership, proximity, possession, common fate, familiarity, etc. The notation U signifies a unit relation so that pUo may mean p is similar (in, say, disability) to, or is familiar with, etc., o . Likewise $-U$ ¹⁰ signifies a negative unit relation. In both types of relations, all three entities, $p - x - o$, can be involved or only two, p and either o or x , can be involved.

A basic assumption of Heider is that sentiment relations and unit relations tend towards a balanced state.

'The concept of balanced state designates a situation in which the perceived units and the experienced sentiments co-exist without stress; there is thus no pressure toward change' (Heider, 1958, p.176).

There is thus mutual interdependence between sentiment relation and unit relations, that is, between p 's liking for o and p 's perceived belongingness with o . If an unbalanced state exists, certain forces (see below) will arise to restore the unbalanced

10. These notations or signs characters are from Heider (in Fishbein, 1967). Elsewhere Heider (1958) uses DL for $-L$ and not U for $-U$.

state. If this change is not possible the unbalanced state produces tension. The conditions of a balanced state are contained in two hypotheses:

- '(a) In the case of two entities, a balanced state exists if the relations between them is positive (or negative) in all respects, i.e. in regard to all meanings of L and U (or -L and -U) ...
- (b) In the case of three entities, a balanced state exists if all three relations are positive in all respects, or if two are negative and one positive' (Heider, in Fishbein, 1967, pp. 40-41. Second brackets added).

In everyday social life there is ample evidence for a preference for balanced states, so that with states of imbalance there are stresses to change. Changes to a harmonious situation can take place either in the sentiment or in the unit relations through actions or through 'cognitive reorganization' on the part of the entities.

This is an outline of Heider's balance theory of sentiments. Discussion may now follow on several cases of balance bearing directly upon attitudes towards disability. Heider himself is not concerned with any one particular group of persons to which his theory could apply. His theory is orientated towards the ways people in general view their relationship with other people. This is why only those cases of balance which, in the author's opinion, are applicable to disabled persons and disability are discussed here.

The first case is the similarity between p and o.
 According to Heider (1958) if p is similar to o this induces ¹¹ p

11. 'The word induce refers to a tendency or force towards the realization of the second relation rather than to its actual production inasmuch as forces against the tendency may exist in the situation' (Heider, 1958, p. 183).

to like o, or p tends to like a similar o. Thus a disabled person p will tend to have favourable or positive attitudes towards another disabled person o. The fact that similar persons tend to associate and to like other is exemplified in many proverbs. Indeed, semantically the verb 'like' means 'similar' as an adjective. But Heider (1958) points out that one can only assume that similarity creates a tendency towards liking. The association between similarity and liking was demonstrated by Fiedler, Warrington and Blaisdell (1952). Given a sociometric choice in a social group the 16 college fraternity male subjects perceived persons they liked best as more similar to themselves than those they liked least. Perceived similarity is important here, for in reality the subjects were no more similar to their best-liked fellow-men than to their least liked fellow-men. Thus it seems that

'the unit-forming factors (in this case, similarity) refer to p's experience of them rather than to the objective state of affairs' (Heider, 1958, p. 185).

On the other hand, Newcomb (1956) maintains that

'... the possession of similar characteristics pre-disposes individuals to be attracted to each other to the degree that those characteristics are both observable and valued by those who observe them' (p. 577).

Under certain circumstances similarity can induce disliking as when similarity carries undesirable connotations. A disabled person may dislike another or other disabled persons because the other person's disability may be an unpleasant reminder of his own, when all the time he wishes to deny or forget his disability. Here an unbalanced state prevails. The disabled person may thus have conflicting attitudes, tending towards positive attitudes, (he is, after all, disabled himself) while still disliking disabled persons in general to the extent that he does not wish to

associate with them.

The second case is the dissimilarity between p and o. According to Heider (1958) if p is dissimilar to o this induces p to dislike o, or p tends to dislike a person different from himself. Thus a person will tend to have unfavourable or negative attitudes towards 'dissimilar' persons, e.g. physically disabled persons. At first glance it may seem that 'opposites attract' would prove to be the exception, but since they have a common purpose to pursue the two apparently dissimilar entities may be considered, in a sense, similar. However, the point of the matter is that if these two cases are considered disabled persons on the whole should express more favourable attitudes towards the disabled than should non-disabled persons.

The third case is the interaction and proximity of p and o. While these two relations are not necessarily linked there is often a causal connection between them. According to Heider (1958) if p is in contact with o this induces p to like o. Hence a person is likely to have favourable attitudes towards a disabled person with whom he has had contact, either through interaction or proximity. Moreover, a further assumption could be that the person who has had contact with disabled persons would have more favourable attitudes towards the disabled than a person who has had no contact. But it is not infrequently that proximity or interaction leads to negative attitudes, despite the many researches cited by Heider in support of the assumption that interaction or proximity increases positive attitudes. Park and Burgess (1924) put the situation in a nutshell;

'Love and hate, longing and disgust, sympathy and hostility increase with intensity of association ... The fact is that with increasing contact either attraction or repulsion may be the outcome, depending upon the situation ...'
(pp. 282-283).

'Depending upon the situation' holds the key to the clarification of the relationship between contact and positive or negative attitudes, and the restatement of the above assumptions. This problem will be examined later, after Heider's fourth and fifth cases of balanced states.

The fourth case is the familiarity between p and o. According to Heider (1958) p tends to like a familiar o. Familiarity is related to proximity and interaction in so far as familiarity is increased through proximity and interaction. Hence a disabled person, because of his familiarity with the problems of disability and disabled persons may feel an empathetic relationship with other disabled persons and show positive attitudes towards them. The parallel between familiarity and similarity can be seen here.

The fifth case is the unfamiliarity between p and o. According to Heider (1958) p tends to dislike an unfamiliar o. Thus a person who is unfamiliar with a disabled person will tend to dislike or express negative attitudes towards that person. Heider postulates two factors responsible for the negative effects of unfamiliarity. First, there is uncertainty in unfamiliar situations whose possibilities may be sufficiently threatening, especially to an insecure person, so that they force him to avoid the situation. In such situation the means to reach a mutual goal are not clearly known. A 'cognitively instructed' situation often occurs when non-disabled and disabled interact. The second factor

'is a more purely intellectual and aesthetic component of the resistance to the unfamiliar. The strange is experienced as not fitting the structure of the matrix of the life space, as not filling one's expectations. The adaptation or change in expectations which is required by meeting the unfamiliar demands energy. It is more comfortable to wear old clothes and to talk with old friends' (Heider, 1958, p. 194).

To return now to the theoretical problem of contact upon attitudes which seems to depend upon the situation. The present study investigates the influence of contact or experience per se on attitudes and on attitude intensity. Suchman (1950) has suggested a technique for ascertaining the intensity of attitudes. After each attitude item statement or content question the following is put :

' "How strongly do you feel about this?" with answer categories of "Very strongly," "Fairly strongly" and "Not so strongly." Repeating such a question after each content question yields a series of intensity answers' (p. 219).

The intensity function

' is based upon the concept of a scalable area in which individuals are ranked from high to low and for which it is possible to measure the intensity of feeling with which people at different scale positions hold their attitudes or opinions' (Suchman, 1950, p. 215).

At both ends of the scale continuum the intensity of feeling is strongest and this decreases as one moves towards the middle of the scale until the point of lowest intensity is reached marking off the 'neutral' or 'indifferent' position. This point of neutrality or indifference is generally known as the zero point. Graphically, since

' ... intensity of feeling goes up as one moves either to the right or to the left of the zero point, the intensity must be a U or J shaped function of the content scale order. The zero point can then be determined as that point on the content scale at which the intensity function reaches its minimum, that is, as that content point corresponding to the bottom of the U or J' (Guttman and Suchman, 1947, p.60).

What then is the function of the zero point besides marking off the point of indifference of feeling? Suchman (1950) explains:

'This zero point appears to offer us an invariant cutting point on a scale running from favourable to unfavourable

which permits us to divide the population into two groups which can be meaningfully labeled as "positive" and "negative" (p. 216).

It is now possible to say who is favourable and who is unfavourable rather than rank people only in terms of degrees of favourableness. In other words, it may well be quite useful to say that, using Heider's (1958) symbols, p is more favourable than o who is more favourable than q . Yet here only the relative degree of favourableness of p , o and q is known. The absolute degree of favourableness, i.e. whether p , o and q have favourable or unfavourable attitudes has still to be ascertained. If p is more favourable than o who is more favourable than q , they could still all hold unfavourable attitudes. Foa (1950), Guttman and Suchman (1947), Mehling (1959), and Suchman (1950), to name a few researchers, have empirically measured the intensity function, using Suchman's (1950) technique and thence, by plotting intensity of feeling against content score, have determined the zero point.

Often the zero point can only be approximated. This happens when the region in which the zero point lies is rather broad and flat, that is, there is a wide area of indifference. The imperfect U or J curve is the result of error in the technique for ascertaining intensity, but this error should in no way detract from its success and heuristic nature, error which, Guttman and Suchman (1947) believe will be reduced with further research.

Mention has been made of the fact that the plotting of the intensity function is dependent on the scalability of the content area and that the zero point is invariant with respect to the set of questions used. These are important criteria. An attitude area is considered 'scalable' if persons who obtain the same total score on a set of questions covering a particular attitude domain

obtain the same scores on each question in the set. From the total score it is possible to know all the replies the particular respondent has endorsed within a 10 per cent margin of error. A scale pattern thus emerges with respondents having the same total score, scoring the same on each content item. No other combination of scores yielding the same total score is compatible with this scale pattern. If the same replies cannot be reproduced from each of the same total scores, there is no scale pattern, the attitude content is said not to be scalable and the zero point cannot be plotted.

It will be noticed that scale analysis attempts to solve the problem of bias. By finding out if an attitude area is scalable or not it is possible to discover whether there is more than a single interpretation present in the responses to each question. A question which has a dominant single meaning should be answered in the same way by all persons who have, say, positive attitudes and should be answered in the same way, but in the opposite direction by all persons who have negative attitudes. This situation reveals any question bias and also allows the area to be scaled within the 10 per cent error. If an area is scalable this implies that the area contains one dominant dimension or variable along which persons may be ranked.

Guttman and Foa (1951) have reported that the amount of social contact was not related to the direction of attitudes, that is, whether they were positive or negative, but to the intensity of attitudes. Specifically, the number of subjects with a favourable attitude remained the same, regardless of the amount of contact, but with increasing amount of contact the intensity of the attitude increased. Findings also confirmed the hypothesis

that lack of intensity, namely the zero point, tends to coincide with indifference. One explanation of the correspondence of increased attitudinal intensity and amount of contact proposed by Guttman and Foa is that

'before contact, a person has either a positive or negative attitude (towards an object or class of objects) ... based upon various factors ... Upon actual contact ... this attitude is sharpened, on the average, in its original direction. Some people may switch from positive to negative, or vice versa, but the average change is to reinforce the pre-existing attitude, or to increase the intensity' (p. 52). Brackets added).

A frequent aim in studying public attitudes is to be able to predict how people will overtly behave towards the attitude object. But, as it has often been shown, attitudes are not the only determinants of overt behaviour towards their objects. The course of the action predicted from attitudes may change due to situational factors, restraints, or competing effects. In relating attitudes to actual overt actions, Rosenberg (1960) states a theoretical rule of thumb which is usually followed:

' .. to the effect that the "stronger" the attitude, the more likely it will be that the subject will take consistent action toward the attitude object ... the more extreme the attitude, the stronger must the action opposing forces be for the action to fail to occur in the particular attitude-eliciting situation in which the forces are operative ... it follows clearly that improvement in the validity of estimates of attitudes intensity will increase the likelihood of successful prediction' (p. 336).

This last statement, it will be remembered, echoes the sentiments expressed above by Guttman and Suchman (1947).

What are the conditions under which contact elicits positive or negative attitudes? As already seen, Guttman and Foa (1951) maintain that upon actual contact the intensity of the attitude is, in the main, increased while the direction remains the

same. According to Newcomb (1956) one of the simplest notions determining positive 'attraction' is that of 'propinquity:'

'other things being equal, people are most likely to be attracted toward those in closest contact with them' (Newcomb, 1956, p.575).

Newcomb is well aware that attraction is not influenced by distance per se. The point is that interaction is more possibly and is more likely to occur with decreasing distance.

Another assumption made is that, other things being equal, interaction or contact and attraction are positively related when the effects of the interaction are more often rewarding than not rewarding. Continued interaction and positive attitudes, of course, depend upon the interacting parties being reciprocally rewarded.

Homans (1951) proposed an hypothesis of mutual dependence of interaction and sentiment:

'If the frequency of interaction between two or more persons increases, the degree of their liking for one another will increase, and vice versa' (p. 112).

This is a two-variate hypothesis and, as Homans says, hold good only as long as 'other things are equal' (like many other hypotheses, for instance, see Newcomb's (1956) quote above). Knowledge of 'other things' is important for a better understanding, in this case of interaction. However, they do not invalidate the hypothesis; rather they require incorporation into further hypotheses, so that a series of hypotheses is constructed with the original one as the foundation. This has been demonstrated by Zetterberg (1955) who quotes a multivariate hypothesis of Malewski who introduced two additional variables to Homans' hypothesis:

'If the costs of avoiding interaction are low, and if there are available alternative sources of reward, the more frequent the interaction, the greater the mutual liking' (p. 66).

Rosenberg (1960, p.321) found that persons tend to hold positive attitudes towards another person or group when they believe that the person or group will be instrumental in the attainment of goals, while negative attitudes towards some object or class of objects are related to beliefs that goal attainment will be frustrated. A similar position is taken by Katz (1960) who says that

'Contact ... can change positive attitudes in the direction of either more positive or negative evaluations depending upon whether the conditions of contact help, or hinder the satisfaction of utilitarian needs' (p. 193).

Reporting on a number of cross-cultural contact studies, Jacobson, Kumata and Gullahorn (1960) found that American colleagues had significantly more positive attitudes towards foreign colleagues when their interaction produced satisfying experiences. In this connection Williams (1957) has hypothesized that personal contacts between members of different groups are generally most effective in producing favourable attitudes when the individuals are of the same, or nearly the same, social status. In other words, favourable attitudes are likely to occur between 'equal-status contacts' where the basis of such equality is secure and certain.

Allport (1954) has reported that contact produces favourable attitudes towards outgroups when there is knowledge about them, when they become true acquaintances of the in-group and when their social status is recognized as equal or superior to the in-group member's status. In contrast, casual contacts tend, on the whole, to reinforce negative attitudes. The finding that true acquaintance lessens negative attitudes is supported by Cook and Selltiz (1955) who report further studies that have investigated

the 'quality' or 'intimacy' of intergroup contact. These showed that the greater the intimacy of the contact the more favourable was the intergroup attitude.

Allport (1954) also presented data revealing that contact on an equal status leads to favourable attitudes when there was mutual participation and interest between the two groups.

CHAPTER 3.

METHODOLOGY AND PROCEDURES.

Variables of the Study.

Attitudes Towards Physical Disability.

To measure this dependent criterion variable the Attitudes Toward Disabled Persons Scale (ATDP) was used. This scale was developed by Yuker, Block and Campbell (1960) at the Human Resources Foundation, the research and teaching division of Abilities, Inc., a company employing physically disabled persons engaged in various light manufacturing operations in Albertson, New York. The structure, reliability, validity and other aspects of the ATDP have already been reported (see Chapter 2).

The ATDP as used in this study (see Appendix A-2) is slightly modified from the original along the lines taken by Jordan (1968, p. 18) and others working at Michigan State University who have all used more or less the same sets of questionnaires and tested the same hypotheses. The first modification was to reduce the Likert-type response categories for each content item statement from six to four: 1. Strongly disagree; 2. Disagree; 3. Agree; 4. Strongly agree. It is not possible to be of no opinion on any content item. The second modification was to state the four optional response categories after each content statement so that the respondent would simply have to circle his chosen category instead of having to transfer a number from a set of coded categories at the top of each page to each question to indicate his response (cf. Yuker et al., 1960). Besides simplifying answering this modification cuts down on time factor for answering.

Each of the 20 attitude items suggests that disabled persons are either the same as, or different from non-disabled

persons. Of these 15 suggest a difference in such a way that agreement on these statements indicates an unfavourable attitude towards, or less acceptance of disabled persons. The other five items (2,5,6,11,12) suggest a similarity in such a way that agreement on these statements indicates a favourable attitude towards, or more acceptance of disabled persons.

When the ATDP is administered to disabled persons, a measure of self-acceptance and self-rejection is obtained; in other words, the extent to which a person accepts himself and his disability or rejects himself and his disability.

The face sheet of the ATDP (Appendix A-2) explained what was meant by 'handicapped persons.' Respondents were required to make their answers refer only to persons who have obvious bodily disabilities in order to narrow the response field and to make the concept 'handicapped' equivalent for all respondents.

Intensity.

To measure the intensity of feeling with which each attitude item of the ATDP was held, the technique proposed by Suchman (1950) was adopted:

'A simple approximation of the intensity function has been successfully attained by asking a question about intensity of feeling after each content question. One form used for an intensity question is simple: "How strongly do you feel about this?" with answer categories of "Very strongly," "Fairly strongly," and "Not so strongly." Repeating such a question after each question yields a series of intensity answers' (p. 219).

Instead of Suchman's three response categories, in accordance with Jordan (1968), four were used in this study: 1. Not strongly at all; 2. Not very strongly; 3. Fairly strongly; 4. Very strongly (see Appendix A-2).

Personal Contact.

Personal contact with disabled persons was measured by nine items taken from Jordan (1968) to constitute the Personal Questionnaire re Handicapped Persons (PQ:HP; see Appendix A-3). The first 4 PQ:HP items tested direct personal contact: 1. The kind of disability with which respondents had had the most contact or experience; 2. Other disability groups with which respondents had had contact; 3. The kinds of experience respondents had had with disabled persons; 4. The approximate number of occasions on which respondents had had personal contact with disabled persons. The other five PQ:HP items tested different aspects of contact; 5. Ease of avoidance of such contact; 6. The material gain from contact; 7. The percentage of income derived from contact; 8. The amount of enjoyment from contact; 9. Alternative opportunities to working with disabled persons.

Demographic Variables.

Although most of the demographic variables were taken from Jordan (1968), all were selected by well-established sociological research tradition in so far as they are often found to have some significant relationship. These variables constitute a major part of the Personal Questionnaire (PQ; see Appendix A-1) and include age (PQ:1); sex (2); youth urbanity setting (3); rural-urban status (4 and 5); marital status (6); number of children (7); income (8); number of siblings (10 and 11); education (17); home or flat ownership (20); rental (21); residential mobility (22, 23 and 25); occupational mobility (24 and 26); occupation (27); disability (29); and home language (30). In addition there were six comparative self-statements concerning income, social class and education; comparative income status; self (PQ:9), father (12); comparative social class;

self (15), father (16); comparative education: self (18), father (19). Not all of these variables are utilized or hypothesized to have a particular relationship with the dependent variable.

Disability.

The kind of disability was gauged by one question, 29, in the PQ (see Appendix A-1) and by a sub-question of question 3 in the PQ:HP (see Appendix A-3).

Religiosity.

As with Jordan (1968), three questions in the PQ were orientated towards religiosity (see Appendix A-1); Religious affiliation (PQ:13), religious importance (14); and religious adherence (28).

Research Hypotheses.

H-1: Disabled persons will express more positive attitudes on the ATDP scale than will non-disabled persons.

H-1 Derivation: From empirical findings reported by Yuker et al. (1960) that such a relationship may be expected since, according to Yuker et al., disabled persons are probably more accepting of disability than non-disabled persons, and from consideration of four cases of Heider's (1958) balance theory of sentiments, namely similarity (if p is similar to o this induces p to like o), dissimilarity (if p is dissimilar to o, this induces p to dislike o), familiarity (p tends to like a familiar o) and unfamiliarity (p tends to dislike an unfamiliar o).

H-1 Instrumentation: The Attitudes Toward Disabled Persons (ATDP) Scale as in Appendix A-2.

H-2: Persons with various types of disabilities will all obtain basically the same scores on the ATDP.

H-2 Derivation: From empirical findings reported by Yuker et al., (1960, 1962) suggesting that there is no relationship between extent and type of disability and ATDP scores, and from consideration of Heider's (1958) similarity and familiarity cases of balance as in H-1 above.

H-2 Instrumentation: The ATDP, and to obtain type of disability two direct questions, PQ:29 and PQ:HP:3 (see Appendix A-1 and A-3).

H-3: The more frequent the contact with disabled persons, the higher will be the scores on the intensity statements of the ATDP scale, regardless of whether the attitude content is favourable or unfavourable.

H-3 Derivation: From empirical findings reported by Jordan (1968) that such a relationship may be expected, and from considerations of Guttman and Foa (1951) and Rosenberg (1960) that the amount of social contact was not related to the direction of attitudes but to the intensity of attitudes.

H-3 Instrumentation: To obtain frequency of contact a direct question PQ:HP:4 (see Appendix A-3) and to obtain ATDP intensity scores the set of separate intensity questions asked after each attitude content item (see Appendix A-2).

H-4: High frequency of contact with disabled persons will be associated with favourable attitudes when high frequency is concurrent with (a) ease of avoidance of contact, (b), enjoyment of contact, and (c) alternative rewarding opportunities.

H-4 Derivation: From empirical findings reported by Arnholter (1962), Cessna (1967), Chesler (1965), Felty (1966), Friesen (1966), Genskow and Maglione (1965), Higgs (1972), Jaffe (1965), Jordan (1968), Palmerton (1968), Siller and Chipman (1964), Webb (1964) and Yuker et al. (1960), confirming various relationships on the above

hypotheses, and from considerations of Heider's (1958) interaction and proximity case of balance (if p is in contact with o, this induces p to like o), Homans (1951) and Jacobson et al. (1960), and Malewski (in Zetterberg, 1965), who have all suggested that one or more of the various relationships of this hypothesis, i.e. H-4a, H-4b, H-4c, and high frequency of contact related to favourable attitudes, may be expected.

H-4 Instrumentation: Attitudes will be measured by the ATDP, and direct questions will be asked for frequency of contact (PQ:HP:4), ease of avoidance (PQ:HP:5), enjoyment (PQ:HP:8), and alternative opportunities (PQ:HP:9) (see Appendix A-3).

H-5: The more personal the contact with disabled persons, the more favourable will be the attitudes towards them.

H-5 Derivation: From considerations of Allport (1954), Cook and Selltitz (1955), and Newcomb (1956) that favourable attitudes tend to be related to the intimacy of contact.

H-5 Instrumentation: To measure attitudes, the ATDP, and to obtain the nature of contact, a direct question PQ:HP:3 (see Appendix A-3).

H-6: For both non-disabled and disabled groups, younger persons will express more favourable attitudes on the ATDP than will older persons.

H-6 Derivation: From empirical findings reported by Knittel (1964), Richardson (1970), and Tunick (1973) concerning non-disabled persons and by Yaker et al., (1960), concerning disabled persons that such a relationship could be expected.

H-6 Instrumentation: To measure attitudes, the ATDP, and to obtain the age of respondents, a direct question PQ:1 (Appendix A-1).

H:7: Females, within both non-disabled and disabled groups, will have more favourable attitudes on the ATDP, than men

within both groups.

H-7 Derivation: From empirical findings reported by Yuker et al., (1960) for disabled and non-disabled females and by Chesler (1965), Dickie (1967), Higgs (1972), Jaffe (1965), Jordan (1968), Krieder (1967), Richardson (1970), Siller (1963), and Tringo (1970 (a) and (b)) for non-disabled females concerning such relationship.

H-7 Instrumentation: To measure attitudes, the ATDP, and to obtain the sex of respondents, a direct question PQ:2 (see Appendix A-1).

H:8: For the non-disabled group, persons with a higher educational level will have more favourable attitudes towards disabled persons than persons with a lower educational level.

H-8: Derivation: From empirical findings reported by Harasymiw (1971), Tringo (1970 (a) and (b)), and Tunick (1973) that such a relationship may be expected.

H-8 Instrumentation: To measure attitudes, the ATDP, and to obtain the educational level of respondents, a direct question PQ:17 (see Appendix A-1).

H-9: For the disabled group, persons at different educational levels will all obtain basically the same scores on the ATDP.

H-9 Derivation: From empirical findings reported by Yuker et al., (1960) that there is no relationship between the ATDP and education for disabled persons.

H-9 Instrumentation: Same as H-8 above.

H-10: Persons who score high on religiosity will score low on positive attitudes on the ATDP.

H-10 Derivation: From empirical findings reported by Jordan (1968) and Tunick (1973) on the existence of this relationship.

H-10 Instrumentation: To measure attitudes, the ATDP, and to

measure religiosity, two direct questions in the PQ concerning religious importance (14) and religious adherence (28)(see Appendix A-1).

Research Population and Initial Sample.

The purpose of this study was to test the above hypotheses with two main groups: non-disabled and disabled persons. So much research is based on student samples - the apparent traditional sociological and psychological research group - because they are conveniently at hand. The unfortunate consequence is that constructive and practical findings are often limited in their generality; the very investigators are aware of this limitation by recognizing that students are, on the whole, an atypical population and that generalizing the findings among students to the wider public must be a wary affair. For this reason, the subjects of this study were not students but the public at large which, quite naturally included a few students. In short, an attempt was made to obtain a sample from which generalizations could be made with more confidence than had a purely student sample been used.

Specifically, the non-disabled population for this study consisted of all those persons registered on the most recent (1972) General Municipal Voters Roll in Ward 17. The Cape Town Municipal area is divided into seventeen wards, each covering certain areas. According to the number of registered voters, Ward 7 is the smallest; it covers a small section of Cape Town central, that is, the Foreshore, and contains approximately 959 persons. Ward 9 is the largest and extends from Maitland to Thornton, and contains approximately 7903 persons. Ward 17 is the largest ward in the area, extending from Clovelly through to Southfield; it contains approximately 6643 persons. A Municipal Voter's Roll is compiled for each

ward. A Roll, which enables enrolled persons to vote in municipal elections is compiled in a number of ways: (1) A form is sent out with all electricity bills for the householder to fill in his/her name and address, and return; and (2) Persons are requested through the mass media to submit their names and addresses. From time to time each Roll is updated.

The 1972 General Municipal Voters Roll for Ward 17 contains White and Coloured persons. From this 6643 research population a 200 research sample was randomly selected through a table of random numbers (Peatman and Schafer, in Roscoe, 1969, pp. 286-287). It is assumed that the sample drawn is genuinely representative of the research population. It is also assumed that Ward 17, being the largest in area and fifth largest in registered voters, may well be representative of the total municipal wards of the Cape Town area, in that it contains persons of lower, middle and upper socio-economic status.

The disabled sample was not randomized but selected from four sources. The selection was necessary for two reasons: Firstly, the disabled persons had to be mentally capable of answering the questionnaires and secondly, the study was concerned with the physically disabled, excluding the purely sensory disabled, i.e. the blind, the deaf and the dumb, and the mentally disabled. The first selection sources was the St. Giles Association for the Handicapped in Rondebosch. St. Giles has a mailing list of about 180 disabled members for its monthly magazine, The Nutshell. Of these 56 did not conform to the above selection criteria or else resided outside the greater Cape Town area, leaving 124 disabled persons. The second source was the Cape Cripple Care Association in Rondebosch from which 12 clients were selected. The third selection source was the

Protea Sports Club in Bergvliet. This club caters for non-disabled and disabled (mostly paraplegic) sportsmen and women. Eight disabled persons were selected here. Lastly, four disabled persons not associated with the above three sources were selected. Thus the total sample of disabled persons was 148. It is assumed that this sample may well be representative of physically disabled persons at large.

Administration, Data Collection and Final Sample.

For the 200 randomly selected non-disabled sample, each person was personally handed the three questionnaires (see Appendix A) at his/her home and was asked to complete them in his/her own time but to return the completed forms as soon as possible in the stamped self-addressed envelope provided. The administrators made the nature of the questionnaires quite clear, emphasized that complete anonymity was desired and explained how each respondent was selected. In addition a telephone number was supplied for the respondents to use should they encounter any difficulties with the questionnaires. All these points were in a personal letter to each respondent which was handed to them with the questionnaires and envelopes.

Administration took place in June-July-August, usually in the late afternoon and early evening which appeared to be a convenient time to find respondents at home. Certain procedures were adopted if, for one reason or another, the respondent could not be contacted or refused to co-operate. If the respondent was not at home, the administrator went back a second and sometimes a third time. On the third time drawing a blank, the administrator handed the questionnaires to the next-door neighbour. If the respondent had moved, the present occupiers were requested to complete the

questionnaire. If they refused, as well as any other respondent who refused, a new name was drawn from the table of random numbers. If the respondent returned his questionnaire uncompleted, which was considered equivalent to an initial refusal, a new name was likewise drawn from the table of random numbers. Thus, while the initial random sample consisted of 200 persons, some of them had to be replaced by further drawings to ensure that a chance be given to 200 willing persons to answer the 200 sets of questionnaires.

For the 148 selected disabled sample, the majority were each sent the set of questionnaires, a stamped self-addressed envelope and the covering letter, explaining various points outlined above, which had been handed to the non-disabled respondents. The rest were each personally handed the questionnaires, etc., and like the majority were requested to return the completed forms as soon as possible.

Collection of data was thus through completed forms being returned in stamped self-addressed envelopes. Of the initial 200 non-disabled sample, 101 (50.5%) returned their completed questionnaire, constituting the final non-disabled research sample. Of the initial 148 disabled sample, 53, (35.8%) returned their completed questionnaires, constituting the final disabled research sample.

Statistical Procedures.

All the relevant data were coded for computer programming. The BDM02D correlation with transgeneration, computed for both groups and males and females within each group, yielded means and standard deviations for each relevant variable and the matrix of simple correlations between all variables. The t test was also used to determine the differences between two means. Hypotheses analyzed

by these two procedures were tested using a one-tailed test for significance, since the nature of the hypotheses dictated that they will be rejected only if significant deviations appeared in the sample in one direction. In this study then, a one-tailed test will be used and hypotheses will be considered supported if the .05 level of significance is attained. Results reaching the .10 level (and over, where available) will be mentioned although this level does not indicate acceptance of the hypotheses.

The simple analysis of variance was used when it was necessary to compare more than two groups. Two-dimensional analysis of variance was used to study the effects of two independent variables on a single criterion. ANOVA tests whether or not the means of a number of groups come from a common population. The two-dimensional analyses of variance as well as the one three-dimensional analysis of variance were computed on the Hewlett-Packard 2114B Computer and 2748A Tape Reader.

The BMD 02R stepwise regression programme was computed for the contact and religiosity variables for both groups. This programme yielded multiple and partial correlations, the standard errors of estimate, analyses of variance, multiple determination coefficients and residuals. The coefficient of multiple correlation and the related coefficient of multiple determination measure the closeness of the relationship between the dependent variable and the combined variables simultaneously (Richmond, 1964). In a partial correlation, it is possible to obtain a measure of the relationship between the dependent variable and any

one of the independent variables, while the other variables are 'held constant.'

Whenever an hypothesis reaches the required significance level of .05 or less, the approximate level of confidence is indicated in the appropriate Table. If an hypothesis does not reach the .05 level, the approximate level is indicated when this figure is obtainable, otherwise 'n.s.' (not significant) is indicated. Statistical significance levels were obtained from Fisher (1954), Fisher and Yates (1953) and Richmond (1964).

For clarity, all hypotheses are stated affirmatively in research form. However, for statistical analyses, they will be tested in the convenient null form - that no significant relationship between the variables exist.

CHAPTER 4.

ANALYSIS OF THE DATA

Descriptive Data

Tables 1 and 2 present the number of respondents, means and standard deviations for 16 variables for the total sample, males and females of the non-disabled and disabled groups respectively.

TABLE 1: Number of respondents, means and standard deviations for 16 variables of the total, male and female non-disabled group.

Variable	Non-disabled Total			Non-disabled Male			Non-disabled Female		
	N.	Mean	S.D.	N.	Mean	S.D.	N.	Mean	S.D.
1. Age	101	45.85	14.50	44	43.34	14.61	57	47.79	14.25
2. Sex	101	1.56	.25	44	1.00	.00	57	2.00	.00
3. Children	101	2.17	1.36	44	1.89	1.26	57	2.39	1.39
4. Income	101	6039.32	5055.54	44	6633.95	4964.94	57	5580.29	5120.52
5. Siblings	101	2.37	1.92	44	2.39	2.05	57	2.35	1.83
6. Importance of religion	101	2.99	.89	44	2.79	.90	57	3.14	.85
7. Adherence to religion	101	3.65	1.14	44	3.52	1.23	57	3.75	1.07
8. Social class(self)	101	3.49	.58	44	3.48	.54	57	3.49	.63
9. Amount of education	101	4.58	1.01	44	4.70	1.15	57	4.49	1.06
10. Amount of Contact	101	2.94	1.74	44	2.73	1.79	57	3.11	1.69
11. HP Ease of Avoidance	101	2.55	1.55	44	2.29	1.55	57	2.77	1.52
12. HP Gain	101	.90	.50	44	.79	.41	57	.98	.55
13. HP Enjoyment	101	2.55	1.34	44	2.25	1.33	57	2.79	1.31
14. HP Alternative Opportunities	101	.23	.94	44	.00	.00	57	.40	1.22
15. ATDP Content	101	46.12	5.49	44	46.70	5.12	57	45.67	5.76
16. ATDP Intensity	101	57.51	10.43	44	57.25	10.13	57	57.72	10.74

TABLE 2: Number of respondents, means and standard deviations for 16 variables of the total, male, and female disabled group.

Variable	Disabled Total			Disabled Male			Disabled Female.		
	N.	Mean	S.D.	N.	Mean	S.D.	N.	Mean	S.D.
1. Age	53	40.08	16.55	27	37.85	17.34	26	42.38	15.70
2. Sex	53	1.49	.25	27	1.00	.00	26	2.00	.00
3. Children	53	.42	.82	27	.41	.79	26	.42	.86
4. Income	53	2928.75	2167.58	27	2808.59	2237.74	26	3053.54	2129.12
5. Siblings	53	2.28	2.09	27	2.44	2.44	26	2.12	1.70
6. Importance of religion	53	3.11	.87	27	2.96	.98	26	3.27	.72
7. Adherence to religion	53	3.87	1.14	27	3.74	1.29	26	4.00	.98
8. Social Class (self)	53	3.15	.56	27	3.11	.63	26	3.19	.48
9. Amount of education	53	3.69	1.46	27	3.56	1.34	26	3.85	1.59
10. HP Amount of Contact	53	4.42	.89	27	4.26	.94	26	4.58	.81
11. HP Ease of Avoidance	53	2.53	1.32	27	2.52	1.31	26	2.54	1.36
12. HP Gain	53	1.09	.36	27	1.11	.42	26	1.08	.27
13. HP Enjoyment	53	3.55	.67	27	3.37	.74	26	3.73	.53
14. HP Alternative Opportunities	53	.15	.53	27	.15	.53	26	.15	.54
15. ATDP Content	53	44.60	8.29	27	46.44	7.63	26	42.69	8.66
16. ATDP Intensity	53	64.23	7.56	27	62.85	7.77	26	65.65	7.21

The data for income were analyzed according to the actual figures reported by the respondents. Interpretation for this variable as well as several others in Tables 1 and 2, for example, age, children, income, siblings, social class, should not present any difficulty when it is realized that these data form ordinal scales in that a higher mean score always represents a higher income, an older person, more children, a higher social class, and so on. Reference to the

relevant questionnaire in the Appendix will facilitate interpretation of the other variables.

The various occupations of the respondents from both groups were placed into six different categories indicating their current employment status. Table 3 presents these data.

TABLE 3: Current employment status composition of total sample by group and sex. ¹

Employment Status	Non-disabled Group			Disabled Group		
	M	F	Total	M	F	Total
1. Employed or self employed	38	19	57	11	11	22
2. Retired	3	1	4	1	0	1
3. Unemployed	0	1	1	2	0	2
4. Housewife	0	32	32	0	4	4
5. Unable to work	0	0	0	11	7	18
6. Student	2	2	4	2	2	4
Total	43	55	98	27	24	51

Table 4 presents the composition of both groups according to marital status.

TABLE 4: Marital status composition of total sample by group and sex.

Marital Status	Non-disabled Group			Disabled Group		
	M	F	Total	M	F	Total
1. Married	38	41	79	11	6	17
2. Single	5	5	10	15	18	33
3. Divorced	1	2	3	0	1	1
4. Widowed	0	9	9	1	1	2
5. Separated	0	0	0	0	0	0
Total	44	57	101	27	26	53

1. In some cases the Ns do not reflect the total number of persons. This is due to no response having been given for the occupation question (PQ:27. Appendix A-1).

On the average, the non-disabled sample were older, had higher incomes, considered themselves in a higher social class and had a higher educational level than the disabled sample. More persons in the non-disabled sample were employed or self-employed and married than persons in the disabled sample.

Table 5 presents the composition of the disabled group according to the type of disability of the person in this group.

TABLE 5: Distribution and means of the disabled respondents according to the type of disability and sex.

Disability	Disabled Males	Disabled Females	Group Total	Group Means
1. Cerebral Palsy	4	7	11	45.64
2. Polio, Multiple Sclerosis and Peripheral Neuritis	4	7	11	46.36
3. Paraplegia	9	5	14	41.21
4. Quadraplegia	2	1	3	45.00
5. Hemiplegia	1	2	3	46.00
6. Amputee, Double and Bilateral	3	0	3	51.33
7. Arthritis and Still's Disease	1	2	3	36.67
8. Other ²	3	2	5	47.60
TOTAL	27	26	53	44.60

Results and Testing of the Hypotheses.

H-1: Disabled persons will express more positive attitudes on the ATDP scale than will non-disabled persons.

2. This category contained the following disabilities, (respondents' quoted answers): 'left hip replacement', 'back injury', 'invalid', 'deformed limbs', and 'in wheelchair'.

Table 6 indicates that disabled persons have lower scores on the ATDP than the total non-disabled group, implying more favourable attitudes. While this is in the hypothesized direction, the difference in mean score was only significant at the .10 level.

TABLE 6: Means, standard deviations, t statistic, and level of significance for ATDP scores³ of total non-disabled and disabled respondents.

Variable	Group	N.	Mean	S.D.	t	Sig. of t
ATDP	Non-disabled	101	46.12	5.49	1.3837	.1
	Disabled	53	44.60	8.29		

However, when the non-disabled group is divided into those who had had contact with disabled persons (the contact group) and those who had had no contact with disabled persons (the no-contact group) a somewhat different picture emerges. As Table 7 shows, the disabled group still have a slightly more favourable score as compared with the contact group, but this does not reach the required level of significance to confirm the hypothesis.

3. In this study, low scores on the ATDP indicate positive attitudes and high scores indicate negative attitudes.

TABLE 7: Means, standard deviations, t statistic, and level of significance for ATDP scores of non-disabled respondents who had had contact with disabled persons and disabled respondents.

Variable	Group	N.	Mean	S.D.	t	Sig. of t
ATDP	Non-disabled Contact	84	45.40	5.52	.6793	.25
	Disabled	53	44.60	8.29		

When the disabled group is compared with non-disabled respondents who had had no contact with disabled persons, the former have significantly lower ATDP scores than the latter. This is shown in Table 8.

TABLE 8: Means, standard deviations, t statistic, and level of significance for ATDP scores of non-disabled respondents who had had no contact with disabled persons and disabled respondents

Variable	Group	N.	Mean	S.D.	t	Sig. of t
ATDP	Non-disabled No Contact	17	49.65	3.39	2.4342	.01
	Disabled	53	44.60	8.29		

With one exception a similar pattern emerges when both sample groups are divided into male and female and these sex divisions are then compared. A comparison was first made between the total non-disabled males and disabled males and then between the total non-disabled females and disabled females. In the first instance, as can be seen in Table 9, there appears to be no significant difference between non-disabled and disabled males, whereas in the second instance, disabled females had statistically significantly lower, i.e. more favourable, scores than non-disabled females.

TABLE 9: Means, standard deviations, t statistics, and levels of significance for ATDP scores of male comparisons and female comparisons between the total non-disabled and disabled groups.

Variable	Sex	Group	N.	Mean	S.D.	t	Sig. of t
ATDP	Male	Non-disabled	44	46.70	5.12	.1720	.45
		Disabled	27	46.44	7.63		
ATDP	Female	Non-disabled	57	45.67	5.76	1.8511	.05
		Disabled	26	42.69	8.66		

If those non-disabled males and females who had had no contact with disabled persons are excluded from the comparisons, so that disabled male respondents are compared with non-disabled male respondents who all had had some contact with disabled persons and disabled female respondents are compared with non-disabled female respondents who all had had some contact with disabled persons, it was found, as shown in Table 10 below, that the mean differences in each comparison were not significant.

TABLE 10: Means, standard deviations, t statistics, and levels of significance for ATDP scores comparing total disabled males with non-disabled males who had had contact with disabled persons and total disabled females with non-disabled females who had had contact with disabled persons.

Variable	Sex	Group	N.	Mean	S.D.	t	Sig. of t
ATDP	Male	Non-disabled Contact	35	46.09	5.06	.2222	.45
		Disabled	27	46.44	7.63		
ATDP	Female	Non-disabled Contact	49	44.92	5.78	1.3253	.10
		Disabled	26	42.69	8.66		

Now t-tests were carried out between the disabled males and those non-disabled males who had had no contact at all with disabled persons and between the disabled females and those non-disabled females who had had no contact at all with disabled persons. Table 11 indicates that both comparisons produced statistically significant results, i.e. the disabled males and females expressed significantly more favourable attitudes than non-disabled males and females who had had no contact with disabled persons.

TABLE 11: Means, standard deviations, t statistics, and levels of significance for ATDP scores comparing total disabled males with non-disabled males who had had no contact with disabled persons and total disabled females with non-disabled females who had had no contact with disabled persons.

Variable	Sex	Group	N.	Mean	S.D.	t	Sig. of t
ATDP	Male	Non-disabled No Contact	9	49.11	4.28	1.9436	.05
		Disabled	27	46.44	7.63		
ATDP	Female	Non-disabled No Contact	8	50.25	1.79	2.4286	.01
		Disabled	26	42.69	8.66		

The hypothesis, H-1, as it is stated here, cannot be thus considered completely confirmed, even though disabled persons had significantly more favourable scores than non-disabled persons who had had no contact with disabled persons.

H-2: Persons with various types of disabilities will all obtain basically the same scores on the ATDP.

As shown in Table 12, no significant difference in the means has been found, indicating that persons with one type of disability do not obtain significantly different scores on the ATDP than persons with other types of disabilities. Tables 13 and 14 indicate that this is so for disabled males and females respectively. Males with one type of disability do not express significantly different attitudes towards themselves and physical disability than males with other types of disabilities; likewise for females. Consequently H-2 can be considered confirmed.

TABLE 12: Summary for the analysis of variance between ATDP content scores and the eight disability categories for the total disabled group.

Variation	df	Sums of Squares	Mean Squares	F	Sig. of F
Between Groups	7	582.69	83.24	1.2529	n.s.
Within Groups	45	2989.99	66.44		
Total	53	3572.68			

TABLE 13: Summary for the analysis of variance ⁴ between ATDP content scores and the eight disability categories for the disabled male respondents.

Variation	df	Sums of Squares	Mean Squares	F	Sig. of F
Between Groups	7	458.66	65.52	1.2685	n.s.
Within Groups	19	981.42	51.65		
Total	27	1140.08			

4. A note about the analysis of variance and its application in a few instances here must be made. Four assumptions underly the simple analysis of variance. Firstly, the samples must be independent random ones; secondly, they must come from normally distributed populations which, thirdly, must be equally variable and fourthly, must have the same means.

'When the hypothesis is rejected, we prefer to assume it is the inequality of the means that has been violated. Fortunately, the analysis of variance is much more sensitive to violations of the assumptions of equal means than to violations of the assumptions of normality or of homogenous variances' (Roscoe, 1969, p. 236).

In some instances, as here for instance, there only appears one subject per category, e.g. one male in disability type 5 and in type 7, one female in disability type 4. When the assumptions of normality and homogenous variances are both violated, Roscoe maintains that the probability of a Type 1 error is likely to be 'perhaps twice as large' as the level of significance. A Type 1 error occurs when a true hypothesis is rejected, and its probability is, under normal circumstances, equal to the level of significance. Fortunately, the F-ratios were not significant whenever the possibility arose that the assumption of normality and homogenous variance might have been violated.

TABLE 14: Summary for the analysis of variance between ATDP content scores and seven disability categories ⁵ for the disabled female respondents.

Variation	df	Sums of Squares	Mean Squares	F	Sig. of F
Between Groups	6	355.45	59.24	.7415	n.s.
Within Groups	19	1518.09	79.89		
Total	26	1873.54			

H-3: The more frequent the contact with disabled persons the higher will be the scores on the intensity statements of the ATDP scale, regardless of whether the attitude content is favourable or unfavourable.

Table 15 reveals that for both groups more frequent contact with disabled persons does not result in significantly higher intensity scores on the ATDP. The total non-disabled group and the non-disabled females were actually in the opposite hypothesized direction with the latter being significantly so at the .05 level. The non-disabled males were even so slightly in the hypothesized direction. On the other hand, the total disabled group, the disabled females and the disabled males tended to be in the hypothesized direction. The disabled females almost reached the .10 level. Since no positive significance was revealed, H-3 is not considered confirmed.

5. There were no female subjects in disability category 6, that is, 'amputee,' hence only seven disability categories for females.

TABLE 15: Correlation coefficients between amount of contact and ATDP intensity scores for both non-disabled and disabled groups.

Group	Intensity	and	Contact
	N.	r	Sig. of r.
<u>Non-disabled.</u>			
Male	44	- .0051	n.s.
Female	57	.2324	.05
Total	101	.1303	n.s.
<u>Disabled.</u>			
Male	27	- .1098	n.s.
Female	26	- .3005	n.s.
Total	53	- .1519	n.s.

Table 16 indicates that for the total disabled group and the total non-disabled group, there was a significant positive relationship between ATDP content scores and ATDP intensity scores. For both groups then an increase in favourable attitudes resulted in an increase in intensity with which respondents held these attitudes. Significant positive correlations were also noted for disabled females while disabled males, non-disabled males and non-disabled females, although not significantly so, were in a positive direction.

TABLE 16: Correlation coefficients between content and intensity scores on the ATDP for both non-disabled groups.

Group	Content	and	Intensity
	N.	r	Sig. of r
<u>Non-disabled.</u>			
Male	44	- .1935	n.s.
Female	57	- .1749	n.s.
Total	101	- .1834	.05
<u>Disabled.</u>			
Male	27	- .2674	n.s.
Female	26	- .5509	.005
Total	53	- .4329	.005

H-4: High frequency of contact with disabled persons will be associated with favourable attitudes when high frequency is concurrent with (a) ease of avoidance of contact, (b) enjoyment of contact and (c) alternative rewarding opportunities.

Non-disabled Sample.

As shown by Table 17 a simple correlation between ATDP content scores and each of the individual contact variables resulted in a significant positive relationship between content and enjoyment of contact and between content and amount of contact. There resulted a significant negative relationship between content and ease of avoidance of contact and a very minute negative directionality between content and alternative rewarding opportunities to contact.

In a partial correlation, holding enjoyment constant, there was a positive relationship, significant at the .10 level, between content scores and amount, but a significant negative relationship between content and avoidance. Once again there was a slight negative directionality between content and alternatives. For the other two partial correlations, as seen from Table 17, no significant relationships existed.

With the addition of each subsequent contact variable to the multiple correlation, the coefficient became increasingly larger. Table 18 shows this and that any increase in significance however diminished as each additional variable was entered. The analysis of variance is used to test the significance of the coefficient of multiple correlation.

The F-ratios for the respective variables are presented in Table 18 and they are all significant. The final multiple regression line showing a significant correlation between the combined contact variables and attitude scores at the .01 level of confidence was:

$$\text{CONTENT SCORES} = 51.051 - (.438 \times \text{Amount}) + (1.295 \times \text{Avoidance}) - (2.692 \times \text{Enjoyment}) + (.652 \times \text{Alternatives}).$$

Therefore the attitudes of the non-disabled group towards disabled persons were more favourable with:

- (a) increased amount of contact,
- (b) decreased ease of avoidance of contact,
- (c) increased enjoyment of contact, and
- (d) decreased alternative rewarding opportunities to contact.

Although this relationship between the combined contact variables and attitude scores was significant, it does not completely support H-4, which consequently cannot be considered confirmed for the non-disabled group. From the simple correlations in Table 17 this result was expected, since the coefficients of avoidance and of alternatives were not in the hypothesized direction.

A look at the coefficients of multiple determination, R^2 , on Table 18 indicates that 21.63 per cent of the variation in ATDP content scores was associated with variations in the four independent contact variables.

Enjoyment accounted for 10.82 per cent of the variation in content scores; avoidance added 8.77 per cent to this variation; alternatives increased this by 1.23 per cent; and amount added a further .82 per cent to the total variation. Enjoyment was thus the most important contact variable contributing the most towards the variation in attitudes on the ATDP of non-disabled persons. This variable was followed in importance by avoidance, alternatives, and lastly, amount. However, the increases in the coefficients of multiple determination caused by the addition of alternatives and of amount were small and insignificant. This may be attributed to the fact that ease of avoidance correlated (negatively) with amount of contact ($r = -.296$; $p = .01$) and that alternatives correlated (positively) with enjoyment of contact ($r = .212$; $p = .05$).

The analyses so far utilized all 84 non-disabled subjects who had had some contact with disabled persons. However in order to test the H-4 as it is stated it was also necessary to isolate those non-disabled respondents who (a) could easily avoid contact with disabled persons, (b) who enjoyed the contact, and (c) who had alternative rewarding opportunities to contact, and then to see whether, for these persons, a significant correlation existed between high frequency of contact and favourable attitudes. Unfortunately, independent variable (c) had to be omitted since too few respondents expressed all three variables. Thirty-seven non-disabled subjects stated that they could both easily avoid contact with disabled persons and that they enjoyed contact. A correlation coefficient of $-.0937$ between amount

of contact and ATDP scores for these subjects was obtained indicating that there is only a minute, very insignificant trend for high frequency of contact with disabled persons to be associated with favourable attitudes when high frequency is concurrent with (a) ease of avoidance of contact and (b) enjoyment of contact. H-4 is thus not considered confirmed for the non-disabled group.

In summary, it seems that for the non-disabled group the easier it was to avoid contact with disabled persons, the less contact they had with disabled persons. Secondly, the more alternative rewarding opportunities to contact with disabled persons, the greater was the enjoyment of contact. Thirdly, the greater the contact with disabled persons, the more favourable the attitudes towards them. Fourthly, the more enjoyable the contact with disabled persons, the more favourable the attitudes towards them. By themselves these conclusions appear to be perfectly rational, and support the theoretical consideration, but H-4 combining favourable attitudes with the four contact variables as it does, is not completely confirmed because, for instance, to increase the frequency of contact, which results in favourable attitudes, it would be necessary here to decrease the ease of avoidance, which is contrary to the stated hypothesis.

TABLE 17: Coefficients of multiple and partial correlations between ATDP content scores and the four contact variables for the non-disabled sample.

Correlated Variable	Multiple R	Partial R			
		Enjoy- ment	Avoid- ance	Alterna- tives	Amount
Content		-.329***	.269**	.052	-.225*
and Enjoyment	.3289		.314***	.132	-.182
and Avoidance	.4426			.124	-.092
and Alternatives	.4562				-.102
and Amount	.4651				

* p = .025

** p = .01

*** p = .005

TABLE 18: Coefficients of multiple correlation, R, and multiple determination, R², the increase in R², and the F-ratios for the four combined contact variables with ATDP content scores of the non-disabled sample.

Step Number	Variable Entered	R	R ²	Increase in R ²	F
1	Enjoyment	.3289	.1082	.1082	9.946 *
2	Avoidance	.4426	.1959	.0877	9.864 *
3	Alternatives	.4562	.2082	.0123	7.010 *
4	Amount	.4651	.2163	.0082	5.452 *

* p = .01

Disabled Sample.

As indicated by Table 19, a simple correlation between ATDP content scores and each of the individual contact variables resulted in a significant positive relationship only between content and enjoyment of contact. The relationships of each of the other three contact variables with content tended slightly towards the hypothesized direction.

In a partial correlation, holding enjoyment constant, there was no significant relationship between content scores and the other contact variables. However, each of these variables displayed a more or less tendency in the hypothesized direction. Similar results were obtained for the other two partial correlations.

With the addition of each subsequent contact variable to the multiple correlation, the coefficient became increasingly larger. However, Table 20 shows that this increase diminished as each variable was entered. The F-ratios, presented in Table 20, as tests of significance for the multiple correlations, were not significant. The final multiple regression line showing a non-significant correlation between the combined contact variables and attitude scores was:

$$\begin{aligned} \text{CONTENT SCORES} = & 62.295 - (.827 \times \text{Amount}) - (1.345 \times \text{Avoidance}) \\ & - (3.136 \times \text{Enjoyment}) - (.962 \times \text{Alternatives}). \end{aligned}$$

Therefore the attitudes of the disabled group on the ATDP tended to be more favourable with:

- (a) increased amount of contact,
- (b) increased ease of avoidance of contact,
- (c) increased enjoyment of contact, and
- (d) increased alternative rewarding opportunities to contact.

Although this relationship between the combined contact variables and attitude scores was in the hypothesized direction, it was not significant. Hence, for the disabled group H-4 cannot be considered confirmed.

As shown by Table 20, the coefficients of multiple determination, R^2 , indicates that 12.25 per cent of the variation in ATDP content scores was associated with variations in the four independent content variables. Enjoyment accounted for 6.54 per cent of the variation in content scores; avoidance added 4.66 per cent to this variation; amount increased this by .70 per cent; and alternatives added a further .35 per cent to the total variation. Enjoyment was thus the most important contact variable contributing the most towards the variation in attitudes on the ATDP of disabled persons. This variable was followed in importance by avoidance, amount, and lastly, alternatives. It should be noted though that the increases in the coefficients of multiple determination caused by the addition of amount and of alternatives were very small and insignificant. This may be attributed to the fact that enjoyment of contact correlated (positively) with amount of contact ($r = .357$; $p = .02$) and that alternatives correlated (positively) with ease of avoidance ($r = .266$; $p = .05$).

Once again the nature of the hypothesis necessitated the isolation of those disabled subjects who exhibited the three pre-requisites of H-4, namely, (a) ease of avoidance of contact, (b) enjoyment of contact, and (c) alternative rewarding opportunities. As was the case with the non-disabled subjects, independent variable (c) had to be omitted because of the paucity of subjects who expressed this variable. So out of the 53 non-disabled respondents subjected to the above analysis, only 15 stated that they could both easily avoid contact with disabled persons and that they enjoyed the contact. In these subjects, a correlation coefficient of $-.2359$ between amount of contact and ATDP scores was obtained, indicating a slight, non-significant trend for high frequency of contact with disabled persons to be associated with favourable attitudes when high frequency is concurrent with (a) ease of avoidance of contact, and (b) enjoyment of contact. H-4 is thus not considered confirmed for the disabled group.

TABLE 19: Coefficients of multiple and partial correlations between ATDP content scores and the four contact variables for the disabled sample.

Correlated Variable	Multiple R	Partial R			
		Enjoy- ment	Avoid- ance	Amount	Alterna- tives
Content		$-.256^*$	$-.191$	$-.134$	$-.082$
and Enjoyment	$.2557$		$-.223$	$-.048$	$-.119$
and Avoidance	$.3346$			$-.089$	$-.066$
and Amount	$.3449$				$-.063$
and Alternatives	$.3500$				

* $p = .05$

TABLE 20: Coefficients of multiple correlation, R , and multiple determination, R^2 , the increase in R^2 and the F -ratios for the four combined contact variables with ATDP content scores of the disabled sample.

Step Number	Variable Entered	R	R^2	Increase in R^2	F
1.	Enjoyment	.2557	.0654	.0654	3.568
2.	Avoidance	.3346	.1120	.0466	3.152
3.	Amount	.3449	.1189	.0070	2.205
4.	Alternatives	.3500	.1225	.0035	1.675

H-5: The more personal the contact with disabled persons, the more favourable will be the attitudes towards them.

The varieties of contact with disabled persons were measured by question PQ:HP:3 (see Appendix A-3). The criterion for gauging the degree of personal contact on this question was proposed by Jordan (1968, p. 255). Respondents were considered to have Impersonal Contact if they circled either or both 1 and 2 of PQ:HP:3; Personal Contact if they circled either or all parts of 3 to 7; and Impersonal and Personal Contact if they circled options from both preceding divisions of contact.

Table 21 presents the non-disabled respondents who fell in the three differential contact groups. Included in this table are persons who stated that they had no contact at all with disabled persons. If the two subjects in the I group are omitted, the group with the most personal contact (M group) have the most favourable attitude mean score, followed by the group with somewhat less personal contact (P group), while the N group have the least favourable attitude mean score.

TABLE 21: Distribution of non-disabled respondents according to the kind of contact with disabled persons.

Contact Group	Non-disabled Group		
	N.	Mean	S.D.
No Contact (N)	17	49.65	3.39
Impersonal Contact (I)	2	41.50	5.50
Personal Contact (P)	47	46.36	5.68
Impersonal and Personal Contact (M)	35	44.34	4.99

As seen from Table 22, there is a significant difference in the means of the four contact groups, N, I, P, and M, which suggest that they do not come from a single population. An analysis of variance calculated without the I group subjects resulted in a F of 6.0117 which was also significant at the .01 level, indicating a significant difference in the means of the three contact groups, N, P, and M.

TABLE 22: Summary for the analysis of variance for the non-disabled group between ATDP content scores and four contact groups.

Variation	df	Sums of Squares	Mean Squares	F	Sig. of F
Between Groups	3	367.44	122.48	4.4881	.01
Within Groups	97	2647.14	27.29		
Total	101	3014.58			

In order to test whether non-disabled persons who had had some kind of contact or experience with disabled persons have more favourable attitudes towards disabled persons than non-disabled persons who had had no contact or experience at all, groups I, P, and M were combined as those having had contact and then compared with group N as having had no contact. Table 23 presents this analysis and reveals that there is a significant difference in mean attitudes towards the disabled between persons with some kind of contact with disabled persons and persons with no contact at all.

TABLE 23: Means, standard deviations, t statistic, and level of significance of ATDP scores comparing non-disabled respondents who had had contact and non-disabled respondents who had had no contact with disabled persons.

Variable	Non-disabled Group				
	N.	Mean	S.D.	t	Sig. of t
Contact	84	45.40	5.53	3.0443	.005
No Contact	17	49.65	3.39		

Tables 22 and 23 suggest that not only is there a significant positive relationship between different kinds of personal contact (not amount) and attitudes, but also that persons who had had no contact with disabled persons express significantly less favourable attitudes towards disabled persons than persons who had had some kind of contact.

A similar pattern occurs when the non-disabled group is divided into male and female. Table 24 presents the distribution of non-disabled respondents according to sex and the degree of contact.

TABLE 24: Distribution of non-disabled respondents according to sex and the kind of contact with disabled persons.

Contact Group	Males		Females	
	N.	Mean	N.	Mean
No Contact (N)	9	49.11	8	50.25
Impersonal Contact (I)	1	36.0	1	47.0
Personal Contact (P)	25	46.64	22	46.05
Impersonal and Personal Contact (M)	9	45.67	26	43.88

Although the mean of the non-disabled males who had had no contact is higher - less favourable attitude - than the means of males who had had some contact, and although the means decrease with increasing degree of contact (except for one male in the I group) an analysis of variance as presented in Table 25 revealed no significant difference in the four means. When an analysis of variance was calculated without the one male subject in the I group the obtained F of 1.2467 was also not significant. There thus appears to be no significant difference even in the means of the three contact groups, N, P, and M.

TABLE 25: Summary for the analysis of variance for the non-disabled male respondents between ATDP content scores and four contact groups.

Variation	df	Sums of Squares	Mean Squares	F	Sig. of F
Between Groups	3	176.51	58.84	2.4756	n.s.
Within Groups	40	950.65	23.77		
Total	44	1127.16			

All non-disabled males who had had contact - groups I, P, and M - were then combined and compared with those males who had had no contact with disabled persons - group N. Table 26 shows this comparison and even though the mean of groups I, P, and M is lower - more favourable attitude - than the mean of group N this difference is significant only at the .10 level.

TABLE 26: Means, standard deviations, t statistic, and level of significance of ATDP scores comparing non-disabled male respondents who had had contact and non-disabled male respondents who had had no contact with disabled persons.

Variable	Non-disabled			Males	
	N.	Mean	S.D.	t	Sig. of t
Contact	35	46.09	5.06	1.6445	.10
No Contact	9	49.11	4.28		

A look at Table 24 shows that, for the non-disabled females, group N had the highest mean, that is the least favourable score and that with an increasing degree of personal contact the attitude score becomes more favourable. The difference in the means of the four non-disabled female contact groups was found to be significant, as indicated by Table 27. With the one female subject in the I group omitted, an analysis of variance resulted in a calculated F of 4.1892 which was also significant at the .05 level of confidence, indicating a significant difference in the means of the three contact groups.

TABLE 27: Summary for the analysis of variance for the non-disabled female respondents between ATDP content scores and four contact groups.

Variation	df	Sums of Squares	Mean Squares	F	Sig. of F
Between Groups	3	255.55	85.18	2.8127	.05
Within Groups	53	1605.12	30.29		
Total	57	1860.67			

Now all the non-disabled females who had had some kind of contact - groups I, P and M - were grouped and compared with those females who had had no contact with disabled persons - group N. Table 28 reveals that the female contact group expressed significantly more favourable attitudes than the female no contact group.

TABLE 28: Means, standard deviations, t statistic, and level of significance of ATDP scores, comparing non-disabled female respondents who had had contact and non-disabled female respondents who had had no contact with disabled persons.

Variable	Non-disabled Females				
	N:	Mean	S.D.	t	Sig. of t
Contact	49	44.92	5.78	2.5789	.01
No Contact	8	50.25	1.79		

Unfortunately it was found that the above data gathered from the contact question PQ:HP:3 (see Appendix A-3) did not lend themselves to a correlation analysis, so that H-5, concerning the more personal the contact, the more favourable the attitude, could not be properly tested. The most that can be said is that for the total non-disabled group and the non-disabled females persons who had had different kinds of contact expressed significantly different attitudes towards disabled persons with a trend for their mean attitude score to be in the hypothesized direction and that those who had had some contact (total group and females) expressed significantly more favourable attitudes towards disabled persons than those who had had no contact. H-5 cannot thus be considered completely confirmed.

H-6: For both non-disabled and disabled groups, younger persons will express more favourable attitudes on the ATDP than will older persons.

Table 29 reveals that for both the total non-disabled group and the non-disabled males, the younger the person the more significantly favourable the attitude. Non-disabled females tended to be in the hypothesized direction but this was not significant. The total disabled group as well as disabled females were in the opposite hypothesized direction, that is, the older the person, the more favourable the attitude; these results were not significant. Disabled males tended to be minutely in the hypothesized direction. Therefore H-6 can only be considered confirmed for the total non-disabled group and the non-disabled males.

TABLE 29: Correlation coefficients between ATDP content scores and age for both non-disabled and disabled groups.

Group	Content and Age		
	N.	r	Sig. of r
<u>Non-disabled</u>			
Male	44	.3660	.01
Female	57	.1011	n.s.
Total	101	.1918	.05
<u>Disabled</u>			
Male	27	.0997	n.s.
Female	26	-.2960	n.s.
Total	53	-.1245	n.s.

H-7: Females within both non-disabled and disabled groups will score more favourable attitudes on the ATDP than males within both groups.

Table 30 indicates that non-disabled females had slightly more favourable attitudes towards disabled persons than non-disabled males. However, the difference between these means was not statistically significant.

TABLE 30: Means, standard deviations, t statistics, and levels of significance for ATDP scores of the males and females within the non-disabled and disabled groups.

Group	ATDP					
	Sex	N.	Mean	S.D.	t	Sig. of t
Non-disabled	Male	44	46.70	5.12	.9393	.2
	Female	57	45.67	5.76		
Disabled	Male	27	46.44	7.63	1.6758	.05
	Female	26	42.69	8.66		

Table 31 presents a two-dimensional analysis of variance where the two independent variables of sex and kind of contact were concomitantly analyzed as to their influence upon ATDP scores. This analysis shows that there is no significant difference in the attitudes of non-disabled male and female subjects (see Table 30); that there is a significant difference in the attitudes of non-disabled subjects who had had different kinds of contact (see H-5); and that the non-significant interaction would suggest that sex and contact are independent of each other as to their effect upon attitudes.

TABLE 31: Summary for the two-dimensional analysis of variance for non-disabled males and females and four contact groups.

Variation	df	Sums of Squares	Mean Squares	F	Sig. of F
Sex	1	38.56	38.56	1.4031	n.s.
Contact	3	224.59	74.86	2.7242	.05
Interaction	3	165.12	55.04	2.0028	n.s.
Within	93	2555.75	27.48		
Total	101	3084.02			

When all the non-disabled males who had had some kind of contact with disabled persons were compared with all the non-disabled females who had had contact, the latter had a more favourable score than the former, but no significant difference between the means was found. This t-test is presented in Table 32.

TABLE 32: Means, standard deviations, t statistic, and level of significance comparing non-disabled males who had had contact with disabled persons and non-disabled females who had had contact.

Variable	Sex	N.	Mean	S.D.	t	Sig. of t
ATDP	Male	35	46.09	5.06	.9596	.2
	Female	49	44.92	5.78		

Then the non-disabled males who had had no contact at all with disabled persons were compared with the non-disabled females who had had no contact. As Table 33 indicates it was the males who had very slightly the more positive score, but once again the difference between the two means was not significant.

TABLE 33: Means, standard deviations, t statistic, and level of significance comparing non-disabled males who had had no contact with disabled persons and non-disabled females who had had no contact.

Variable	Sex	N.	Mean	S.D.	t	Sig. of t
ATDP	Male	9	49.11	4.28	.6992	.25
	Female	8	50.25	1.79		

Concerning the disabled group, it would appear from Table 30 that disabled females had significantly more favourable ATDP scores than disabled males. A two-dimensional analysis of variance testing the difference between disabled males and disabled females, the differences between types of disability, and the significance of the interaction, as shown in Table 34 reveals that there was no significant difference in the attitudes of disabled males and females; that there is no significant difference in the attitudes of disabled persons with various types of disabilities (see H-2); and that there is no significant interaction between sex and types of disabilities.

TABLE 34: Summary for the two-dimensional analysis of variance for disabled males and females and seven disability groups.

Variation	df	Sums of Squares	Mean Squares	F	Sig. of F
Sex	1	137.83	137.83	1.9689	n.s.
Disability	6	435.19	72.53	1.0361	n.s.
Interaction	6	223.13	37.19	.5312	n.s.
Within	36	2520.08	70.00		
Total	50	3316.23			

It will have been noticed from Table 34 that only 7 out of the total 8 disability groups were submitted to the two-way analysis of variance. (The outcome of the analysis in the two sources of variation, that is, sex and disability, was non-significant.) Only 7 disability groups were used because in disability type 6 - 'amputee, double and bilateral' - there were only three males and no females, therefore this type was omitted. The omission of this group would seem to account for the different results obtained for sex differences in the above two-way ANOVA and the t-test in Table 30. The F-ratio for sex differences, excluding the males in disability type 6, was non-significant, while the t-statistic including the males in disability type 6 was significant. The mean of the disabled males excluding the three from disability type 6 is 45.83 which is lower than the mean of the total disabled males of 46.44.

Now if a t-test were calculated between this lower male mean and the total female mean of 42.69, it would probably yield a non-significant t, since the calculated t in Table 30 for the disabled males and females is significant at the .05 level against the tabled t only by .005. In fact this is the case, with a calculated t of 1.4266 being significant only at the .1 level. However the observations here do not invalidate the significant findings in Table 30; they merely explain why the F-ratio for the sex variable in Table 34 was not significant.

It thus seems that although the results show differences between males and females of both groups on the ATDP to exist and in the hypothesized direction, the difference in mean scores between disabled males and disabled females was only significant and so H-7 can be considered confirmed only for disabled males and females and not for non-disabled males and females.

H-8: For the non-disabled group, persons with a higher educational level will have more favourable attitudes towards disabled persons than persons with a lower educational level.

As shown in Table 35 there is the minutest tendency for the total non-disabled group, as well as the non-disabled females to be in the hypothesized direction. It is however, most trivial and nowhere near being statistically significant. The non-disabled males were very insignificantly in the opposite direction.

TABLE 35: Correlation coefficients between ATDP content scores and the levels of education for the non-disabled group.

Group	Content and Education		
	N.	r	Sig. of r
<u>Non-disabled</u>			
Male	44	.0124	n.s.
Female	57	-.0916	n.s.
Total	101	-.0379	n.s.

In Table 36 the influence of kinds of contact with disabled persons and educational levels were concomitantly studied. The kinds of contact included non-disabled respondents within the N contact group, the P contact group, and the M contact group (see Table 21). The educational levels included non-disabled respondents within educational levels 3, 4, 5 and 6 (see PQ:17, Appendix A-1). Seven persons altogether, within I contact group and within educational levels 1, 2, 7 and 8 were omitted since there were too many empty categories here.

It was found that there was a significant difference in the attitudes of non-disabled subjects who had had different kinds of contact (see H-5); that there was no significant difference in the attitudes of non-disabled subjects at the four educational levels (see Table 35); and that there was no significant interaction between contact and education on attitudes towards disabled persons. In other words, this non-significant interaction would suggest that the influence of contact and education upon attitudes is independent of each other.

TABLE 36: Summary for the two-dimensional analysis of variance for the non-disabled group with three contact groups and four educational levels.

Variation	df	Sums of Squares	Mean Squares	F	Sig. of F
Contact	2	221.74	110.87	4.0640	.05
Education	3	86.99	28.99	1.0629	n.s.
Interaction	6	141.93	23.66	.8671	n.s.
Within	82	2237.03	27.28		
Total	94	2687.69			

A three-dimensional analysis of variance was computed between non-disabled males and females in the same contact groups and at the same educational levels as the above two-way ANOVA. Table 37 reveals that, once again, the only significant result is that the kind of contact with disabled persons significantly influences the attitudes held towards them (see H-5). There appears no significant difference in the attitudes of non-disabled males and females (see Table 30) and in the attitudes of non-disabled persons at the four educational levels (see Tables 35 and 36). There was no significant interaction upon attitudes between males and females and the kind of contact, (see Table 31); between males and females and the four educational levels; and between non-disabled persons in the three contact groups and at the four educational levels (see Table 36). Moreover, the non-significant interaction between the three sources of variation suggest that the effects of contact, education, and being male or female, upon attitudes towards disabled persons are independent of each other.

TABLE 37: Summary for the three-dimensional analysis of variance for non-disabled males and females, three contact groups, and four educational levels.

Variation	df	Sums of Squares	Mean Squares	F	Sig. of F
Sex	1	16.32	16.32	.5742	n.s.
Contact	2	264.48	132.24	4.6539	.05
Education	3	73.47	24.49	.8619	n.s.
Sex/Contact	2	4.92	2.46	.0865	n.s.
Sex/Education	3	53.38	17.79	.6262	n.s.
Contact/Education	6	167.60	27.93	.9831	n.s.
Interaction	6	64.84	10.81	.3803	n.s.
Within	71	2017.44	28.41		
Total	94	2662.45			

In the light of these findings H-8 cannot be considered confirmed.

H-9: For the disabled group, persons at different educational levels will all obtain basically the same scores on the ATDP.

Table 38 indicates that while there were small tendencies for the total disabled group, disabled males and disabled females at higher educational levels to express more self-accepting attitudes than disabled persons at lower educational levels, these were not significant. Therefore, since the results reveal that persons at different educational levels do not obtain significantly different ATDP scores, H-9 is considered confirmed.

TABLE 38: Correlation coefficients between ATDP content scores and the levels of education for the disabled group.

Group	Content and Education		
	N.	r	Sig. of r
<u>Disabled</u>			
Male	27	-.1079	n.s.
Female	26	-.2560	n.s.
Total	53	-.2084	n.s.

A two-dimensional analysis of variance, as presented in Table 39 revealed a significant interaction between the two levels of sex and five educational levels. Disabled males at each of the five levels of education had significantly different attitudes than disabled females at each of the same five educational levels. Three levels of educational, 6, 7 and 8 (see PQ:17, Appendix A-1) were omitted from the analysis because of the lack of subjects in these categories. Five disabled subjects were thus omitted. However, this finding is actually more relevant to H-7 where disabled females were found to hold significantly more favourable attitudes to disabled males. It thus seems that not only is there a significant difference in the attitudes of disabled males and females, but there is also a significant interaction upon attitudes between males and females and educational levels. On the other hand this latter result, although significant, is not very meaningful, since,

whereas the disabled females have decreasing mean attitude scores with increasing education until educational level 5, that is, the higher the educational level, the more favourable the attitude (this is not significant), no such trend appears for the disabled males. The means of the disabled males and females at the different educational levels appear in Table 40.

TABLE 39: Summary for the two-dimensional analysis of variance for disabled males and females and five educational levels.

Variation	df	Sums of Squares	Mean Square	F	Sig. of F
Sex	1	65.08	65.08	1.1237	n.s.
Education	4	137.59	34.39	.5939	n.s.
Interaction	4	622.78	155.69	2.6883	.05
Within	38	2200.78	57.92		
Total	48	3026.23			

TABLE 40: Number and means of disabled males and females at the eight educational levels.

	M a l e s								F e m a l e s							
	Educational				Levels				Educational				Levels			
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
Mean	39	50.2	52.8	42.1	52.5	-	-	48	52.5	44.8	42	41.4	41.2	36.7	52	-
Number	1	5	5	13	2	-	-	1	2	4	4	7	5	3	1	-

What is more relevant here is the result that there was no significant difference in attitudes of disabled persons at the five educational levels. Therefore, since the results reveal that persons at different educational levels do not obtain significantly different ATDP scores, H-9 is considered confirmed.

H-10: Persons who score high on religiosity will score low on positive attitudes on the ATDP.

Non-disabled Sample.

Three questions were orientated towards religion: (a) religious affiliation (PQ: 13), (b) religious importance (PQ: 14), and religious adherence (PQ: 28). The last two constitute religiosity here, so that irrespective of religious affiliation, H-10 states a relationship between ATDP content scores and religious importance plus religious adherence.

The simple correlation contained in Table 41 between ATDP content scores and each of the individual religiosity variables resulted in a non-hypothesized relationship, significant at the .05 level between content and religious importance. The relationship between content and religious adherence was most trivially in the non-hypothesized direction.

In a partial correlation, holding importance constant, there was no significant relationship between content scores and adherence, although this was slightly in the hypothesized direction.

With the addition of adherence to the multiple correlation, the coefficient did not become significant. In fact, the F-ratios, which test the significance of the multiple correlation coefficients and which are shown in Table 42, are not significant for either variable. Table 42 also shows by the coefficient of multiple determination, R^2 , that adherence added only 1.81 per cent of the total variation of 4.49 per cent in the ATDP content scores. Religious importance was thus the most important contributing variable to the attitude score.

The final multiple regression line showing a non-significant correlation was:

$$\text{CONTENT SCORES} = 48.229 - (1.803 \times \text{Importance}) + (.898 \times \text{Adherence}).$$

Therefore the attitudes of the non-disabled group towards disabled persons tended to be more favourable with

- (a) increased religious importance and
- (b) decreased religious adherence.

This relationship between the combined religiosity variables and attitude scores was not significant and does not support H-10, which consequently cannot be considered confirmed for the non-disabled group. From the simple correlations in Table 41, this result was expected, since the coefficients of importance and adherence were not in the hypothesized direction.

TABLE 41: Coefficients of multiple and partial correlations between ATDP content scores and the two religious variables for the non-disabled sample.

Correlated Variable	Multiple R	Partial R	
		Importance	Adherence
Content		-.164*	-.016
and Importance	.1637		.136
and Adherence	.2118		

* $p = .05$

TABLE 42: Coefficients of multiple correlation, R, and multiple determination, R², the increase in R², and the F-ratios for the two combined religious variables with ATDP content scores of the non-disabled sample.

Step Number	Variable Entered	R	R ²	Increase in R ²	F
1	Importance	.1637	.0268	.0268	2.726
2	Adherence	.2118	.0449	.0181	2.301

Disabled Sample.

As indicated in Table 43, simple correlations between ATDP content scores and the individual religiosity variables resulted in no significant relationships, the one for adherence being most minutely in the hypothesized direction and the one for importance, most minutely in the opposite direction.

In a partial correlation, holding adherence constant, there was also no significant relationship between content scores and importance, although this was very slightly in the hypothesized direction. Moreover, neither multiple correlation coefficients were significant.

The final multiple regression line which, however, was very far from being significant, was:

$$\text{CONTENT SCORES} = 45.989 + (1.783 \times \text{Importance}) - (1.793 \times \text{Adherence}).$$

Therefore the attitude of the disabled group tended to be more favourable with:

- (a) decreased religious importance, and
- (b) increased religious adherence.

As all the results were insignificant, H-10 is not confirmed for the disabled group.

TABLE 43: Coefficients of multiple and partial correlations between ATDP content scores and the two religious variables for the disabled sample.

Correlated Variable	Multiple R	Partial R	
		Adherence	Importance
Content		.093	-.018
and Adherence	.0928		.106
and Importance	.1403		

TABLE 44: Coefficients of multiple correlation, R, and multiple determination, R^2 , the increase in R^2 , and the F-ratios for the two combined religious variables with ATDP content scores of the disabled sample.

Step Number	Variable Entered	R	R^2	Increase in R^2	F
1	Adherence	.0928	.0086	.0086	.443
2	Importance	.1403	.0197	.0111	.502

Discussion of the Hypotheses.

Hypothesis 1 stated that disabled persons will express more positive attitudes on the ATDP scale than will non-disabled persons. Analysis of the data relevant to H-1 revealed that no statistically significant differences in the means existed between the total disabled and total non-disabled respondents (Table 6); between the total disabled respondents and those non-disabled respondents who had had contact with disabled persons (Table 7); between the total disabled male and total non-disabled male respondents (Table 9); and between the total disabled male and female respondents and those non-disabled male and female respondents respectively who had had contact with disabled persons (Table 10). Statistically significant differences in the means existed between the total disabled respondents and those non-disabled respondents who had had no contact with disabled persons (Table 8); between the total disabled female and those non-disabled female respondents who had had contact with disabled persons (Table 11). Moreover, with one exception, the disabled sample, whether total or males and females had lower means than the non-disabled sample, whether total or sub-divided by sex and contact. The one exception was that the non-disabled males who had contact were 0.35 lower in mean score than the disabled males.

The hypothesis, as it is stated here, cannot be considered confirmed. Nevertheless, the results do reveal a tendency for disabled persons to be more accepting of themselves and their disabilities than non-disabled persons are accepting of disabled persons. This tendency reaches statistical significance (one-tailed test; $p = .05$) when disabled persons are compared with non-disabled persons who had had no contact with

the disabled. In addition, disabled females were significantly more accepting of themselves and their disabilities than all non-disabled females were of disabled persons. Here then is partial support for H-1. The other results suggest that contact may be an important factor in more positive attitudes towards, or more acceptance of, disabled persons. Yuker et al. (1960) found that a sample of 170 Hofstra College students obtained significantly less favourable ATDP scores ($p = .001$) than a sample of 248 disabled Abilities employees. They do not indicate whether or not the students had had contact with disabled persons. Another finding of theirs was that with non-disabled subjects the amount of contact with disabled persons was significantly related ($p = .001$) to the degree of acceptance of the disabled. (The influence of contact on a non-disabled person's attitude will be discussed more fully at a later stage.) The important point is that when Yuker et al. (1960) compared disabled with non-disabled subjects, they did not control for sex or any other variable. The only indication as to the nature of their samples is that the mean age of the disabled employees is 43 and consists of approximately 186 males and 62 females.

In a later review by Yuker et al. (1966) it was reported that 1079 disabled male subjects expressed significantly more favourable attitudes on the ATDP ($p = .001$) than did 1689 non-disabled male subjects and that 219 disabled female subjects expressed significantly more favourable attitudes ($p = .001$) than did 1410 non-disabled female subjects. This was the case here when the no contact non-disabled

males and females were compared with the disabled males and females respectively. As will be recalled, disabled females also scored significantly lower scores than the total non-disabled females.

Yuker et al. (1960) postulated an explanation for the tendency for disabled persons to express more positive attitudes than non-disabled persons on the basis that disabled persons are probably more accepting of disability than non-disabled persons. The explanation is rather tautological in that the cause and effect are 'explained' in the same terms. Heider's (1958) balanced cases of similarity and familiarity (see page 59f) offer a more sophisticated explanation. A disabled person, because of his similarity to other disabled persons and familiarity with the socio-psychological problems of disability should be able to reflect a truer similarity-difference picture concerning disability, compared to physical normalcy and thus express relatively more positive attitudes on the ATDP than a non-disabled person without this special kind of empathy. This applies even more so to a physically normal person who had had no contact with disabled persons, in that he is not at all familiar with disabled persons and their various handicaps so that theoretically, there should be a substantial discrepancy in attitudes between this kind of person and a person who is disabled or even a person who had had contact with disabled persons. Disabled persons were found to have only slightly more favourable attitudes than non-disabled persons who had had contact with disabled persons, but

significantly more favourable attitudes than non-disabled persons who had had no contact. It would appear then, that contact with disability and disabled persons, giving the person a better understanding and more sympathetic outlook of the socio-psychological nature of disability, influences the favourableness of attitudes more than the variable of disability itself. Two other findings reinforce this assertion. The one is that persons with various types of disabilities all obtain basically the same attitude scores (H-2). The other is that non-disabled persons with some kind of contact with disabled persons express significantly more favourable attitudes towards them than non-disabled persons who had had no contact (H-5).

When administered to disabled persons, the ATDP is a measure of self-acceptance or self-rejection and disability-acceptance or disability-rejection (Yuker et al. 1960). Dixon (1973) using another attitude scale found that disabled persons also express generally more favourable attitudes towards 'the disabled' than did non-disabled persons. However, as indicated in Chapter 2, so much research on this thesis' topic reveals contrary results. For instance, Brookfield (1970) found, using the same scale as Dixon (1973) that disabled subjects were significantly more favourable towards a physically normal person than toward a disabled person, while Arnholter (1962) showed that disabled persons were least accepting on the ATDP as compared to non-disabled fellow workers and rehabilitation professionals.

A noteworthy feature of the ATDP scores obtained here is the narrow range expressed by both groups. The possible scoring range extends from 20 for the most favourable attitudes to 80 for the least favourable. (As pointed out, in this study low ATDP scores indicate favourable attitudes and vice versa). The range of content scores for the non-disabled group extended from 32 to 60 and of the 101 non-disabled respondents, 93 (92.08%) scored between 40 and 60. The range of content scores of the disabled group extended from 26 to 58 and of the 53 disabled respondents 38 (71.69%) scored between 40 and 58. Thus the total range of content scores of both groups extended from 26 to 60 with 131 (85.06%) of the 154 respondents scoring between 40 and 60. If the standard deviations are taken into account, 68.26 per cent of the non-disabled group's scores fell between 40.63 and 51.61 and 68.26 per cent of the disabled group's scores fell between 36.31 and 52.89. Within such a narrow scoring range it is difficult to determine who is meaningfully more favourable than someone else. This difficulty is linked with the problem of meaning equivalence and content scalability which will be discussed at a later stage (see section 'Recommendations relating to the ATDP').

Hypothesis 2 stated that persons with various types of disabilities will all obtain basically the same scores on the ATDP.

The results (Tables 12 - 14) suggest that respondents' scores on the ATDP may be unrelated to the type of their disabilities. Table 5 presents the distribution and the means of disabled subjects according to their type of disability and their sex. Persons with arthritis appear to be the most self-accepting (low scores indicate positive attitudes and vice versa) while amputees appear the least self-accepting.

The results here confirm those obtained by Yunker et al. (1960, 1962) who found no relationship between ATDP scores, that is, self-acceptance or self-rejection, and the type and extent of disability. However, Smits (1964) found that the mean self-concept score of mildly disabled adolescents was significantly higher than the mean self-concept score of severely disabled persons. Smits did not use the ATDP but self-concept is very closely related to self-acceptance.

Self-acceptance or self-rejection is related to the perception of how one looks to others, and to the feelings one has about the judgments of how one looks to others - Cooley's looking - glass self. Brookfield (1970) found that a subject's attitude toward self related positively to his perception of the attitudes of others towards him. Now there is conclusive evidence (a rare phenomenon in the attitudinal area covered by this thesis) that an hierarchy of preference towards various disability groups exists (Elsberry, 1974; Goodman et al. 1963; Matthews and Westie, 1966; Richardson et al. 1961; Tringo, 1970; and others). Since some disabilities elicit more favourable

attitudes from non-disabled persons than other disabilities, those disabled persons who are ranked fairly low by non-disabled persons in the preference hierarchy, which appears to be relatively consistent, may perceive these relatively negative attitudes towards them and consequently reflect these attitudes in scoring low on attitude toward self, wishing to reject the cause of their perceived negative attitudes, that is, their disability. Conversely, disabled persons who are ranked fairly high by non-disabled persons may reflect these positive attitudes towards them in scoring high on attitudes towards self. The hierarchy of disabled persons' attitudes towards self obtained here (see Table 5) is, from most favourable to least favourable: (1) Arthritis; (2) Paraplegia; (3) Quadraplegia; (4) Cerebral Palsy; (5) Hemiplegia; (6) Polio; (7) Other; (8) Amputee. Of these groups Tringo's (1970) hierarchy by non-disabled subjects was: (1) Arthritis; (2) Amputee; (3) Paraplegia; and (4) Cerebral Palsy. Except for 'amputee,' Tringo's hierarchy of preference seems most comparable with the hierarchy of attitudes of disabled groups towards themselves obtained here. In other words, the disability groups most favourably evaluated by non-disabled persons were the ones who expressed the most favourable attitudes towards themselves. It must be remembered, though, that the analyses of variance revealed no significant differences in the means of the various disability groups.

Hypothesis 3 stated that the more frequent the contact with disabled persons the higher will be the scores on the intensity statements of the ATDP scale, regardless of whether the attitude content is favourable or unfavourable.

Table 15 indicated that for both groups except non-disabled females more frequent contact with disabled persons did not result in significantly higher intensity scores on the ATDP. The non-confirmatory findings for the total non-disabled group and the non-disabled males are in agreement with Dickie (1967) and Friesen (1966) who also found that no relationship existed between contact and intensity. In Jordan's (1968) study, the hypothesis was supported in five nations, positively directional in four nations and in the opposite hypothesized direction in the United States. Cessna (1967), Krieder (1967) and Palmerton (1968) also found a significant relationship between contact frequency and intensity of attitudes towards disabled persons.

According to Friesen and to the results here, intensity does not seem differentially a function of the amount of contact with either the non-disabled or disabled group as far as the ATDP is concerned. The results do suggest that more favourable attitudes on the part of both groups may be significantly related to higher intensity scores (Table 16). The more accepting a non-disabled person was of disabled persons and a disabled person of himself and 'disability,' the stronger he held this attitude.

It is rather difficult from the non-significant finding between contact and intensity to propose a sound interpretation, but it seems best to regard the null hypothesis as tenable, pending further evidence.

Hypothesis 4 stated that high frequency of contact with disabled persons will be associated with favourable attitudes when high frequency is concurrent with (a) ease of avoidance of contact, (b) enjoyment of contact, and (c) alternative rewarding opportunities. A multiple regression line showed a significant correlation between the combined contact variables and attitude scores, indicating that the attitudes of the 84 non-disabled subjects towards disabled persons were more favourable with (a) increased amount of contact with disabled persons, (b) decreased ease of avoidance of contact, (c) increased enjoyment of contact, and (d) decreased alternative rewarding opportunities to contact. Enjoyment was the most important contact variable contributing the most towards the variation in attitudes on the ATDP for non-disabled persons. This variable was followed in importance by avoidance, alternatives and lastly, amount. Other findings were that the easier it was to avoid contact with disabled persons, the less contact they had with disabled persons. Secondly, the more alternative rewarding opportunities to contact with disabled persons, the greater was the enjoyment of contact. By themselves these conclusions appear to be perfectly rational and support the theoretical considerations, but H-4, combining favourable attitudes with the four contact variables, as it does, is not completely confirmed because, for instance,

to increase the frequency of contact, which results in favourable attitudes, it would be necessary here to decrease the ease of avoidance, which is contrary to the stated hypothesis.

Moreover, H-4 was not supported when those non-disabled subjects were isolated who stated that they could easily avoid contact with disabled persons and enjoyed the contact, and a correlation done between their attitudes and the frequency of their contact with disabled persons. There appears to be no correlation between frequency of contact and favourableness of attitude, given that the person enjoys the contact and can easily avoid it. Given these two prerequisites there appears to be no reason why there is a necessity for frequency of contact to ensure favourableness of attitudes. It is quite reasonable to assume that a person with a low frequency of contact has favourable attitudes when these two prerequisites are present. Without these two concomitant variables it was found that the greater the contact with disabled persons, the more favourable the attitudes towards them. One explanation might be that the person enjoyed such contact. Indeed, this is the case since it was found that the more enjoyable the contact with disabled persons, the more favourable the attitude. In turn, this may be due to the availability of alternative rewarding opportunities to contact which so happens to be the case, insofar as there was a significant positive correlation between alternatives and enjoyment of contact.

Concerning the disabled sample, a multiple regression line showed a non-significant correlation between the combined contact variables and attitude scores. However, the trend was for the attitudes of the disabled group to be more favourable with (a) increased amount of contact, (b) increased ease of avoidance of contact (c) increased enjoyment of contact, and (d) increased alternative rewarding opportunities to contact. Once again the enjoyment was the most important contact variable, contributing the most towards the variation in attitudes on the ATDP for disabled persons. This variable was followed in importance by avoidance, amount and lastly, alternatives. These tendencies are perfectly rational and substantiate the theoretical propositions discussed in Chapter 2, but because they were not significant, H-4 for the disabled group, cannot be considered confirmed.

As was done for the non-disabled subjects who had had contact, those disabled subjects who exhibited the two prerequisites of H-4, that is (a) ease of avoidance of contact and (b) enjoyment of contact, were first isolated and then their content scores and amount of frequency count were subjected to a correlation analysis. (It will be remembered that for both groups the last contact variable of H-4 - alternative rewarding opportunities - had to be omitted, because too few subjects expressed this variable). Only 15 disabled persons expressed that they could both easily avoid contact with other disabled persons and that they enjoyed the contact. For them a correlation coefficient between amount of contact and ATDP scores was not significant, so that there appeared to be merely a slight trend for high

frequency of contact with disabled persons to be associated with favourable attitudes when the high frequency of contact is concurrent with (a) ease of avoidance of contact and (b) enjoyment of contact. Thus, for the disabled group, H-4 is not supported.

Using non-disabled subjects, H-4 was completely confirmed by Cessna (1967), Friesen (1966) and Jordan (1968). On the other hand, as was the case here with the non-disabled group, other researchers obtained significant results only between attitudes and one or two separate contact variables. For instance, Krieder (1967) reports that enjoyment of contact and ease of avoidance were 'frequently' related to attitude favourableness. Dickie (1967) found a significant positive relationship between amount of contact and attitude scores. There have also been some negative findings, for instance, in Felty's (1965) study, amount of contact was not significantly positively related to ATDP content scores.

Palmerton (1968) reported only conditional confirmation for this hypothesis, in that he found high frequency of contact, enjoyment of contact and alternative rewarding opportunities related positively to favourable attitudes towards disabled persons. However, as was found here with the non-disabled group, ease of avoidance of contact related negatively at a significant level with favourable attitudes towards disabled persons. He suggested that difficulty in concept equivalence may account for this unexpected negative relationship. The ease of avoidance question

(see PQ:HP:5, Appendix A-3) is intended to refer to a matter of volition rather than a necessity to make the contact. The suggestion was that subjects may have interpreted the phrase 'easy to avoid contact' as being similar to easy to 'side-step' or 'dodge' contact with disabled persons. If the underlying assumption of the ease of avoidance question put forward by Palmerton is valid, then it may well be that avoidance is positively related to attitudes.

It is interesting to note that for both groups the enjoyment of the contact contributed most to the hypothesized relationship. In other words, it would seem that perceived enjoyment is significantly associated with attitude favourableness. This has important implications especially for the non-disabled group, in that any programme aimed at decreasing unfavourable attitudes towards disabled persons must devise means for increasing the enjoyment of contact with disabled persons.

Hypothesis 5 stated that the more personal the contact with disabled persons, the more favourable will be the attitude towards them. Analysis of the data revealed there was a significant difference in the attitudes of non-disabled subjects who had had different kinds of contact. The different kinds of contact were impersonal contact (I), personal contact (P), impersonal and personal contact (M), and no contact (N). With the exception of the I group, persons with the most personal contact had the most favourable attitude mean score, the group with somewhat

less personal contact had a less favourable attitude mean score, while the no contact group had the least favourable score. An analysis of variance calculated for these three groups indicated that there was a significant difference in the means of these three groups. Despite these findings, to properly test the hypothesis, a correlation analysis needs to be done. This could not be undertaken as the data were not scalable. Therefore H-5 could not be completely tested. The above findings and those following would suggest however the validity of H-5. These other findings are that non-disabled persons with some kind of contact with disabled persons have significantly more favourable attitudes towards them than persons with no contact. However, for non-disabled males there was no significant difference in the means of the different contact groups. Nor did those males who had had contact with disabled persons express significantly different attitudes than males who had had no contact. On the other hand, females within the different contact groups were found to have significantly different attitudes and that those females who had had contact with disabled persons expressed significantly more favourable attitudes towards them than females who had had no contact.

Once again, contact appears to be an important variable influencing the favourableness of attitudes. Although a correlation could not be done, the significant findings would still seem to lend weight to the assumptions and reports of Allport (1954), Cook and Selltiz (1955) and Newcomb (1956) on the possible expectation of a positive relationship between attitude and kind of contact.

Hypothesis 6 stated that for both non-disabled groups, younger persons will express more favourable attitudes on the ATDP than will older persons. Results showed (Table 29) that for both the total non-disabled group and the non-disabled males, the younger the person the more significantly favourable the attitude. No significant correlations were obtained for the non-disabled females and the total, male, or female disabled respondents.

Concerning non-disabled persons, other studies have found that younger persons express more favourable attitudes towards disabled persons than older persons (Knittel, 1964; Richardson, 1970; Tunick, 1973). But here again conflicting evidence appears, even by the same investigators. Richardson (1970) also found that older persons express more favourable attitudes. No relationship between ATDP scores and age has been reported Siller and Chipman (1964). Often age is confounded with another variable. Knittel (1964) reported a positive relationship between ATDP scores and age when the latter is confounded with education. Tringo (1970) reported that an increase in age and education resulted in an increase in acceptance of disability groups.

It may well be that when relationships between attitudes and age do occur, they are more likely to be explicable not in terms of age per se, but rather in terms of age and some other variable. What is required is a careful control of these possible confounding variables (they may even be independent predictor variables by

themselves) to test whether age varies with attitudes independently or dependently on either one or more of them. Older persons had significantly higher educational levels than younger persons ($r = .2020$, $p = .05$) which suggests that ATDP attitudes are not a function of age and education. No significant relationship was found between age and frequency of contact ($r = -.0544$) which rules out contact as a confounding variable for age. A possible confounding variable for age might be religious importance and religious adherence in that the younger the non-disabled person, the more important was his religion to him ($r = .2124$, $p = .05$) and the more he adhered to the rules and regulations of his religion ($r = .1997$, $p = .05$). By themselves religious importance could be considered to be positively related to attitudes at the .10 level ($r = .1637$) while there was no significant relationship between religious adherence and attitudes ($r = .0158$). A new suggested hypothesis may be that younger non-disabled persons who regard their religion as more important will express more favourable attitudes than older non-disabled persons who regard their religion as less important.

Concerning disabled persons, Yuker et al. (1960) found that disabled persons younger than average scored high on the ATDP. Here the result suggested no significant relationship between self-acceptance and age. Moreover, there was almost no correlation at all between age and education ($r = .0002$) and older disabled persons did not have significantly more contact with other disabled persons ($r = -.2708$, $p = .10$) than younger disabled persons. Notwithstanding Yuker et al.'s finding, this investigator would like to consider

the null H-4 as true until proven otherwise. A tentative interpretation is offered. According to Yuker et al. (1960) no relationship exists between ATDP scores and the age at which the person became disabled. If this is true, there is no reason why younger and older persons should score significantly different on the ATDP. Moreover, if age happens to be confounded with, say, familiarity or contact as seems to be the case for non-disabled persons than persons with a disability, for the very reason that they all have some kind of disability, all share more or less the same familiarity with the problems, etc., of disability no matter what age they are and hence, irrespective of age, they should all express basically the same attitudes.

On the other hand, it might be argued for both groups that younger persons may value physical appearance, strength, mobility and so on, more than older persons, and thus in the case of non-disabled persons, may be less accepting of disabled persons and in the case of disabled persons, less accepting of themselves and their disability than older persons. But apparently this is not so for the non-disabled group.

Hypothesis 7 stated that females within both non-disabled and disabled groups will score more favourable attitudes on the ATDP than males within both groups. Concerning the non-disabled group there appeared to be no significant difference in the attitude of male and female subjects (Table 30 and 31). There was also a non-significant interaction between sex divisions and contact (Table 31). Comparisons between non-disabled males and non-disabled females, firstly,

who had had contact with disabled persons, and secondly, who had had no contact with disabled persons were not significant (Tables 32 and 33). Concerning the disabled group, Table 30 indicates that the disabled females had significantly more favourable ATDP scores than disabled males.

It thus seems that although the results show differences between males and females of both groups on the ATDP to exist and in the hypothesized direction, the difference in mean scores between disabled males and disabled females was only significant and so H-7 can be considered confirmed only for disabled males and females and not for non-disabled males and females.

Studies on the relationship between sex and attitudes are quite contradictory. As indicated in Chapter 2, ten studies have reported that non-disabled females express more favourable attitudes towards disabled persons than non-disabled males. Taken on number alone, there does appear to be substantial evidence that females hold more positive attitudes than males. Siller (in McDaniel, 1969) suggested a possible explanation for this:

'An implication may be that the underlying feelings are similar but that women are more subject to social pressures to compensate for this attitude' (p. 25).

Another explanation may be that since females are considered to be the 'carriers of culture' they will reflect the prevalent societal norms better than will males. According to this suggestion when the prevalent societal norms towards disabled persons advocate a favourable or positive

disposition, which seems to be the general trend in most industrialized societies, then females should reflect these norms and tend to be more favourable than males. Of course this is a matter of empirical verification.

A finding of Jordan (1968, p. 39) is relevant here. Women within seven nations and across all ten nations scored higher than men in the need to help others. It should follow then that because the disabled are frequently viewed as needing help, females should more readily help disabled persons than males, and consequently be more accepting of them. This he found to be so across all nations but only within two nations, the United States and Colombia (Table 45). Jordan speculated about his unconfirmed hypothesis concerning the relationship of sex and the need to help others in the three nations by suggesting that in these nations, England, France and Denmark, there seems to be less societal differentiation between the sex roles of loving and caring.

'Perhaps as either personal affluence or national development occurs both men and women can be tender-minded rather than assigning tough-minded roles to men and tender-minded roles to women' (Jordan, 1968, p. 102).

This might possibly explain why females tend to express more favourable attitudes towards disabled persons than males - because of the societal sex role differentiation. Yet the above quotation is not an apt explanation for the unconfirmed results obtained here. In South Africa neither personal affluence nor national development occurs which de-emphasizes sex role differentiation.

What is interesting is to compare the means of the males and females obtained by Jordan in the ten nations with the means of the non-disabled males and females obtained in this study. Table 45 contains this information and also includes a comparison of the total group means.

TABLE 45: Number and means of total non-disabled sample and males and females within eleven nations and across ten nations on the ATDP.¹

Nation	Males		Females		Total	
	N.	Mean	N.	Mean	N.	Mean
1. United States	183	46.04	209	44.58	392	45.31
2. Costa Rica ²	126	39.29	147	38.38	273	38.84
3. Colombia	84	52.55	130	50.24	214	51.39
4. Peru	195	50.28	98	52.15	293	51.22
5. England	26	39.69	38	46.74	64	43.22
6. Holland	124	48.06	101	48.36	225	48.21
7. France	64	49.69	64	49.55	128	49.62
8. Yugoslavia	104	52.35	84	52.07	188	52.21
9. Denmark	96	49.07	57	47.16	153	48.12
10. Japan	113	50.65	97	50.47	210	50.56
Across Nations	1101	48.20	1042	47.34	2143	47.77
11. South Africa	44	46.70	57	45.67	101	46.12

1. The male and female data within and across the ten nations were taken from Jordan (1968, p. 41, Table 9) but the data of the total sample within and across the ten nations were computed from Jordan's male and female data as no means for total nation samples were given.
2. Only in Costa Rica do high ATDP scores indicate positive attitudes and low scores negative attitudes. Reversed to be in line with the other nations' mean scores, the means would be: Males 40.17; Females 41.62; and Total 41.17.

Only in the United States and Colombia and when combined across the ten nations did females express significantly more favourable attitudes towards the disabled than males, while in Peru, males held significantly more favourable attitudes than females. In all, there was a tendency for females to score more positively on attitudes towards disabled persons than males in seven nations (and across Jordan's ten) whereas males tended to score more positively than females in four nations.

Table 46 presents hierarchies of favourableness, from most to least, for the total sample, males and females of the eleven nations according to the rank order of the respective means in Table 45 (see also note 2).

TABLE 46: Rank order of favourableness according to the mean ATDP content scores for eleven nations comparing total samples, male samples and female samples.

Rank ³	Male Sample	Female Sample	Total Sample
1	England	Costa Rica	Costa Rica
2	Costa Rica	United States	England
3	United States	South Africa	United States
4	South Africa	England	South Africa
5	Holland	Denmark	Denmark
6	Denmark	Holland	Holland
7	France	France	France
8	Peru	Colombia	Japan
9	Japan	Japan	Peru
10	Yugoslavia	Yugoslavia	Colombia
11	Colombia	Peru	Yugoslavia

Concerning the disabled group, females had significantly more positive ATDP scores than males (Table 30). It was also found that there was no significant interaction between sex and type of disability, that is, males with various disabilities did not express significantly different attitudes to females with the same disabilities (Table 34).

3. Rank of 1 to 11 from most to least favourable mean ATDP scores.

Now, Yuker et al. (1960) found that disabled females were more self-accepting than disabled males. The result obtained here reveals that this does appear to be so. A study by Smits (1964) examined self-acceptance and the extent of disability. His finding that severely disabled females have a lower self-acceptance than both severely disabled males and mildly disabled females is not only contrary to Yuker et al.'s (1960) result, and the findings here but also has implications for H-2 where the type of disability was found to be unrelated to attitudes. Moreover, a result obtained here was that there is no interaction between sex and types of disability; in other words, disabled males with various types of disabilities did not express significantly different attitudes than disabled females with the same various types of disabilities.

Hypothesis 8 stated that for the non-disabled group, persons with a higher educational level will have more favourable attitudes towards disabled persons than persons with a lower educational level. Table 35 shows that there is only a minute tendency for the total non-disabled group and the non-disabled females to be in the hypothesized direction. Moreover, Table 36 reveals a non-significant interaction between contact and education, and Table 37 reveals a non-significant interaction between sex divisions and education, as well as a non-significant interaction between sex divisions, contact and education.

In the light of these findings, H-8 cannot be considered confirmed. This result is contrary to the reports of Harasymiw (1971), Tringo (1970) and Tunick (1973) who report

positive relationships between attitudes and education. In Tringo's study, education, confounded with age, produced a positive relationship with attitudes. Different levels of intelligence do not seem to influence the direction of attitudes towards the disabled, but, as in the case of age, education may be related to the positiveness or negativeness of attitudes when confounded with some other variable. Here when the variables of sex and contact were confounded with education, the interaction upon attitudes was not significant. What is required is further empirical studies in which these intervening variables are held constant while each is tested in turn in order to gauge more accurately which variable influence attitudes the most.

A possible explanation for the non-significant results obtained here may lie in the fact that the range of non-disabled respondents' level of education was very narrow. No respondent fell at either end of the educational level question (see PQ:17 in Appendix A-1), that is, at '3 years of school or less' and at 'one or more advanced degrees.' Only one circled '6 years of school or less,' and only four circled 'some graduate work beyond the first degree.' The majority ranged from '9 years of school or less' (15), '12 years of school or less' (36), 'some college or university' (26), to 'a college or university degree' (19). H-8 is thus really only generalizable to these four educational levels.

Hypothesis 9 stated that for the disabled group, persons at different educational levels will all obtain basically the same scores on the ATDP.

The results reveal that persons at different educational levels do not obtain significantly different ATDP scores (Table 38). H-9 is thus considered confirmed. Further analysis indicated that disabled males at five educational levels expressed significantly different attitudes than disabled females at the same five educational levels (Table 39).

The result concerning no significant correlation between ATDP content scores and levels of education for disabled persons seems to confirm Yuker et al.'s (1960) findings.

The range of disabled respondent's level of education was much broader than the non-disabled's range. In fact, all eight levels of the education question (see PQ:17 in Appendix A-1) were occupied, although the number of respondents in some was very small. At the '3 years of school or less' level there were three respondents; at the '6 years of school or less' level, none; at the '9 years of school or less' level, nine; at the '12 years of school or less' level, twenty; at the 'some college or university' level, seven; at the 'a college or university degree' level, three; at the 'some graduate work beyond the first degree' level, one; and at the 'one or more advanced degree' level, one.

Hypothesis 10 stated that persons who score high on religiosity will score low on positive attitudes on the ATDP. Concerning the non-disabled sample, their attitudes towards disabled persons tended to be more favourable with

(a) increased religious importance and (b) decreased religious adherence. This relationship between the combined religiosity variables and attitude scores was not significant, nor does it support H-10.

The attitudes of the disabled sample on the ATDP tended to be more favourable with (a) decreased religious importance and (b) increased religious adherence. This relationship was very far from being significant, nor does it support H-10. Consequently H-10 cannot be considered confirmed for either non-disabled or disabled group.

Jordan's (1968) data on attitudes and religiosity indicated little support for this hypothesis. It would seem from the non-significant results obtained here for both groups that H-10 should perhaps be reformulated. This is one area that clearly needs further research.

In summary, the following are the findings which emerged from the analyses of the data of this research. Positive results mean that the .05 level of confidence was attained. Negative results mean that this significance level was not attained. The lower the score on the ATDP, the more favourable the attitude.

1. Disabled persons do not score lower on the ATDP than non-disabled persons (H-1).
2. Disabled persons do not score lower on the ATDP than those non-disabled persons who have had contact with disabled persons (H-1).
3. Disabled persons have lower ATDP scores than those non-disabled persons who have had no contact with disabled persons (H-1).

4. Disabled males do not score lower on the ATDP than non-disabled males (H-1).
5. Disabled females have lower ATDP scores than non-disabled females (H-1).
6. Disabled males do not score lower on the ATDP than those non-disabled males who have had contact with disabled persons (H-1).
7. Disabled females do not score lower on the ATDP than those non-disabled females who have had contact with disabled persons (H-1).
8. Disabled males have lower ATDP scores than those non-disabled males who have had no contact with disabled persons (H-1).
9. Disabled females have lower ATDP scores than those non-disabled females who have had no contact with disabled persons (H-1).
10. Persons with various types of disabilities, whether as a group or divided into males and females, all have basically the same ATDP scores (H-2).
11. For non-disabled persons, as a group as well as males, frequency of contact is not positively related to ATDP intensity statements (H-3).
12. For non-disabled females there is a negative relationship between frequency of contact and ATDP intensity statements (H-3).
13. For disabled persons, whether as a group or divided into males and females, frequency of contact is not positively related to ATDP intensity statements (H-3).

14. For non-disabled persons, as a group, there is a positive relationship between ATDP content scores and ATDP intensity scores (H-3).
15. For non-disabled males and females, ATDP content scores are not positively related to ATDP intensity scores (H-3).
16. For disabled persons, as a group as well as females, there is a positive relationship between ATDP content scores and ATDP intensity scores (H-3).
17. For disabled males ATDP content scores are not positively related to ATDP intensity scores (H-3).
18. For non-disabled and disabled persons, high frequency of contact with disabled persons is not associated with favourable attitudes when high frequency is concurrent with (a) ease of avoidance of contact and (b) enjoyment of contact (H-4).
19. Non-disabled persons, whether as a group or divided into males and females, who have had different kinds of contact, have different scores of the ATDP (H-5).
20. Non-disabled persons who have had contact with disabled persons have lower ATDP scores than non-disabled persons who have had no contact with disabled persons (H-5).
21. Non-disabled males who have had contact with disabled persons do not score lower ATDP scores than non-disabled males who have had no contact with disabled persons (H-5).

22. Non-disabled females who have had contact with disabled persons have lower ATDP scores than non-disabled females who have had no contact with disabled persons (H-5).
23. For the non-disabled persons, as a group as well as males, the younger the person, the lower the ATDP score (H-6).
24. For non-disabled females, age and ATDP scores are not inversely related (H-6).
25. For disabled persons, whether as a group or divided into males and females, age and ATDP are not inversely related (H-6).
26. Non-disabled females do not have lower ATDP scores than non-disabled males (H-7).
27. Disabled females have lower ATDP scores than disabled males (H-7).
28. There is no interaction between non-disabled males and females and kinds of contact (H-7).
29. Non-disabled females who have had contact with disabled persons do not score lower on the ATDP than non-disabled males who have had contact with disabled persons (H-7).
30. Non-disabled males who have had no contact with disabled persons do not score lower on the ATDP than non-disabled females who have had no contact with disabled persons (H-7).
31. There is no interaction between disabled males and females and various types of disabilities (H-7).

32. For non-disabled persons, whether as a group or divided into males and females, education is not positively related with ATDP scores (H-8).
33. For non-disabled persons, there is no interaction between kinds of contact and educational levels (H-8).
34. There is no interaction between non-disabled males and females and kinds of contact and educational levels (H-8).
35. Disabled persons, whether as a group or divided into males and females, at different educational levels all have basically the same ATDP scores (H-9).
36. There is an interaction between disabled males and females and educational levels (H-9).
37. Non-disabled persons and disabled persons who score high on religiosity do not score high on the ATDP (H-10).

CHAPTER 6

RECOMMENDATIONS AND SUMMARY

Recommendations relating to the ATDP.

The technique outlined by Suchman (1950) of plotting content scores by intensity scores to obtain a U- or J- shaped curve, the lowest point of which, that is, the zero point, serving to divide the research sample into a 'favourable' group and an 'unfavourable' group with the zero point representing the point of neutrality or indifference, could not be carried out on the ATDP because it was found that the ATDP content items were not scalable (Friesen, 1966; Jordan, 1968). Plotting this zero point is meaningful only if the content items form a scale in the Guttman sense. This has already been discussed in Chapter 2. Briefly, the determination of a zero point does not depend on the particular set of questions used (Guttman and Suchman, 1947). Regardless of the particular set of questions used the zero point will divide the research sample into the same two groups on the issue under investigation. The problem of bias is thus solved since the zero point cannot be determined if a particular set of questions measures more than one area or domain or, comparing the results of two sets of questions, if the two sets of questions do not relate to the same single issue.

A prerequisite to the cutting of a sample into positive and negative groups is to ascertain

'... whether or not it is at all meaningful to arrange people in rank order along a single continuum with respect to the particular area being studied. This means that the area must be tested to see if it is scalable for the given population of people' (Guttman and Suchman, 1947, p. 59).

The underlying assumption of the scalability of any sample of questions, as well as the universe of questions from

which any sample of questions may be selected, is that it has a single 'content variable' for all respondents, in other words, that the attitude under investigation is unidimensional. Respondents who obtain the same total score will thus obtain the same scores on each content item. Hence from a respondent's total score it is possible to know, within a 10 per cent margin of error, what answers he gave to each question. It is now meaningful to arrange persons in rank order on the area from positive to negative or from favourable to unfavourable. The rank order of persons from one scalable sample of questions must be essentially the same as the rank order that could be obtained from the universe of questions on the area being studied. It follows then that the rank order of persons from one scalable sample of questions will be the same as the rank order from another sample of questions on the same area.

However, as Guttman and Suchman (1947) point out,

'If a given universe of content is not scalable, then it is not meaningful to order people from high to low, and in particular it is not meaningful to speak of people being positive or negative on the area. The lack of scalability indicates that more than one content variable is involved and no single ranking or division into pro and con can be made' (p. 60).

According to Friesen (1966) and Jordan (1968) the ATDP measures more than one content variable and its content is not scalable. This is why the zero point cannot be plotted. The fact that the ATDP does not form a scale in this sense and measures more than one content variable may account for many of the contradictory results reported in Chapter 2 and by Yuker et al. (1966). It may also account for the contradictory results obtained by different attitude instruments supposedly measuring the same attitude dimension.

That the ATDP has a number of content variables rather

than only one, points to the multidimensional nature of attitudes in general. Many attitudes, and certainly complex attitudes such as the ATDP measures are not unidimensional. In this connection, Jordan (1968) attempted to submit the ATDP to Guttman's multidimensional analysis and to Guttman's facet theory analysis. The first technique need not be discussed. Suffice to say that Jordan could not analyze the ATDP by the first method for several reasons, one of which was difficulty in computer programming. Facet theory analysis was undertaken in some detail and showed that

'the ATDP is at best a scale of verbal-symbolic-beliefs about the disabled' (Jordan, 1968, p. 73).

Yuker et al. (1960, 1966) have assumed that two basic factors underly the ATDP. Approximately half of the items imply similarities or differences in 'personality characteristics,' while the others imply that disabled persons should have or should not have 'special treatment.'

Now Siller and Chipman (1964) factor analyzed the ATDP separately for 245 high school students, 553 college students and 75 female adults. One factor appeared for all three groups but Siller and Chipman report difficulty in deciding upon the number of factors for each sample. The college and adult samples each had five factors although for the latter group six and eight factors were considered as alternatives. A two-factor solution was accepted for the high school sample. Factor I, labelled Hyper-sensitive-Depressed, included 53 per cent of the variance. This factor involved

'... acceptance of statements claiming the handicapped to be grouchy, worrying, more easily upset than non-disabled, inclined to self-pity, keeping to themselves, etc.' (Siller and Chipman, 1964, p. 836).

Factor II, labelled Benevolent Inferiority, included the remaining

47 per cent of the variance. This factor involved acceptance of the items

'... that it is almost impossible for the disabled to lead normal lives, that one should not expect too much from the handicapped, they should not be expected to meet the same standards, and cannot be as happy as the non-disabled' (Siller and Chipman, 1964, p. 836).

Another possible factorial solution for this sample revealed that part of the Hypersensitive-Depressed factor could form another factor, labelled Depression - Strained Interaction which involved those items stressing

'... the social interaction difficulties assumedly inherent in dealing with the handicapped' (Siller and Chipman, 1964, p. 836).

Jordan (1968) compared factor analysis with facet theory analysis. When the content items of a scale are largely evolved through an a posteriori method, that is, on an empirical basis, and Jordan is of the opinion that the ATDP items were selected in this manner, relevant or necessary variables may be unintentionally omitted. Factor analysis on the scale

'... can only "rotate" that which it is given, i.e. the item statements. If major factors have been omitted or improperly represented, the factor analysis will still blindly turn out a "best" set of factors' (Jordan, 1968, p. 16).

With facet theory, variables can be accepted on a theoretical basis rather than on an empirical one. The basic assumption of facet theory is that the attitude universe, from which samples of attitude items are drawn, can be divided or substructured into components. Each component is defined in terms of conceptual elements.. The components are related in a systematic order according to the number of identical conceptual elements they hold in common. Since the entire attitude universe is substructured

into components, items from each of the derived component may be sampled to form a scale while this also permits the relationship between the various components to be determined.

Mention was made of the problem of bias, and that this is solved to a large extent when a content area is scalable. It seems then that there may be some bias in the ATDP. Guilford (1967) defined 'response bias' as

'a response to a test item (which) tends to be altered in such a way that it indicates something other than that which we intended it to measure' (p. 277. Brackets added).

Several kinds of response sets are applicable to the ATDP. Firstly there is social desirability. Correlating the scores from Edwards' (1957) Social Desirability Scale with ATDP scores, Yuker et al. (1960) found that the coefficient was not significant and concluded that

'the ATDP measures something other than social desirability as defined by Edwards' (Yuker et al., 1966, p.37).

However, Feinberg (1966), using the Crowne and Marlowe (1964) Social Desirability Scale reported that social desirability significantly influenced responses on the ATDP. In the author's opinion it does seem possible to answer the ATDP so as to make a good impression. Faced with a question such as: 'Physically handicapped persons are just as intelligent as non-handicapped ones,' the respondent who wants to give a socially desirable answer instead of an honest answer would answer 'Strongly agree' or 'Agree' rather than 'Strongly disagree' or 'Disagree.' The majority of other questions are of the same nature. Of course, many respondents may be honest, but the point is that the possibility of giving socially desirable answers seems to exist.

Secondly, there is the response set of acquiescence. Here there is a tendency to give more affirmative responses than negative answers. Most of the questions suggest that disabled persons are different from non-disabled persons and five questions suggest that disabled persons are similar to non-disabled persons. Data reviewed by Yuker et al. (1966) reveal that ATDP scores do correlate with measures of acquiescence but not significantly.

Finally, it is necessary to mention some general observations about the ATDP. It is doubtful whether some of the questions are equivalent in meaning or content for all the respondents. On the one hand the scale was designed as a measure of attitudes towards all disabled persons and Tringo (1970) finds support for this validity of generalized attitudes by demonstrating that each of 21 disability group variables correlates higher with the overall score than with other disability variables. If anything, the problem appears (at least to the author) to be more one of the degree of disability, rather than the type of disability. Question 3 of the ATDP: 'Handicapped people are usually easier to get along with than other people.' For various reasons, if respondents are thinking of mildly handicapped people, they may indicate more positive attitudes to this question than if they were thinking of severely handicapped people. It might be very difficult to settle for one answer from four response categories (six on the original scale) for 'handicapped people.' Question 5: 'Physically handicapped people are the same as any one else,' is so broad as to leave much room for individual interpretations. 'The same' can refer to socially the same, emotionally the same, psychologically the same, physically the same, and so on. The reference point of respondents' answers remains unknown.

Question 8: 'It is up to the Government to take care of physically handicapped persons,' poses the problem for the respondent of whether or not the person is so severely disabled that he cannot be financially independent. What specifically is meant by 'to take care of?' Other questions, notably numbers 10, 13, 14, and 17 to a greater or lesser degree lack meaning equivalence. Only one question (12) differentiates between mild and severe disabilities, but then has the same content as question 3, which inquires about 'handicapped people.' Questions 13 and 17 are so similarly worded that it seems one question would have sufficed. It is recommended that the ATDP be administered to two matched groups of physically normal persons. The questions submitted to the one group should all refer to mildly disabled persons. The questions to the second group should all refer to severely disabled persons. This is one way of studying the problem of meaning or concept equivalence as it pertains to the ATDP. Another suggestion in trying to equalize meaning would be to define all ambiguous terms or concepts in the ATDP so that the questions would not be subject to individual interpretation.

A final note on this problem should be mentioned. It appears to the author that if the ATDP is, to a greater or lesser extent, not equivalent in meaning and in addition, measures more than one content variable, then there would be a certain amount of difficulty in deciding whether or not one person is more favourable than another person when the range of scores is narrow. Of course, statistically it can be determined that one sample is significantly more favourable than a second. But this statistical significance is not very meaningful when the content of a scale it analyzes measures different things for different people. This hinges on

what precisely does the ATDP measure?

The underlying assumption of the ATDP is that when administered to non-disabled persons, those who agree with the statements suggesting a difference between disabled persons and physically normal persons have less accepting, that is, less favourable attitudes, and vice versa. Those who agree with the statements suggesting a similarity between disabled persons and physically normal persons have more accepting, that is, more favourable attitudes, and vice versa. Now if a respondent has had close personal contact with, say, cerebral palsied persons in the capacity of a professional therapist or other such personnel, he or she will not agree on question 2: 'Physically handicapped persons are just as intelligent as non-handicapped ones.' Does this mean that they have negative attitudes? A better assumption is that they do see a difference but that they are expressing a realistic answer which is, of course, very far from being less accepting of disabled persons. If a respondent disagreed on question 5: 'Physically handicapped people are the same as anyone else,' referring to physical features, the author submits that he is perfectly correct and is merely expressing a difference between 'physically handicapped persons' and 'everyone else' without necessarily holding a negative attitude. Other questions may be discussed in the same way. A similar position is taken by Bell (1962) who says:

'I think at the present time we can more safely say that the ATDP scale provides a measure of the attitude that the physically disabled differ in certain ways from the general population than that the scale measures "degrees of acceptance" of handicapped' (p. 185).

The position is strengthened by Siller and Chipman's (1964) factor analysis of the ATDP which specified that some of

the ways that the physically disabled may differ from the general population is that they are more hypersensitive, depressed and inferior. A single attitude score of acceptance or rejection of disabled persons may thus obscure the multidimensionality of attitudes towards the disabled.

Palmerton (1968) has likewise suggested that the underlying assumptions of the ATDP be reconsidered. It is recommended that there are grounds for such a reconsideration since persons indicating a difference between disabled and non-disabled persons may be reflecting a relatively true picture of disabled persons and are confused with persons who only believe disabled persons are different from non-disabled persons. On the present basis both are considered to hold negative attitudes. In other words, persons considered to be holding negative attitudes, that is, non-accepting, may instead each be expressing quite different sentiments.

A few words of caution from the ATDP developers:

'Responses to single items should not be interpreted since no evidence for their validity is presented ... The authors believe that a meaningful interpretation is possible only with regard to the general pattern of responses to the items as a set, and not with individual items' (Yuker et al., 1966, p. 32).

This caution depends to a large extent upon the number of questions that are susceptible to the above criticisms. Moreover, in the last analysis, the present assumptions are based on a unidimensional approach while scale and factor analysis indicates that attitudes towards disabled persons are complex and multidimensional.

Recommendations relating to the Samples.

In this study, samples were secured from available populations. For the non-disabled group, random sampling was employed, whereas for the disabled group the sample was selected

according to the criterion of ability to complete the questionnaires and was restricted to persons with visual bodily physical disabilities. As an exploratory study, it is thought that any sampling bias here does not impose too great a limitation on the study. However, the results are generalized with the sampling procedure in mind.

Concerning the non-disabled sample, it is recommended that in future research this sample be more representative. It might prove fruitful to compare urban-rural samples, as well as different ethnic samples. Research might be extended not just to persons having had contact with disabled persons, but to persons actively involved with them.

Concerning the disabled sample, it is recommended that a greater number be investigated. The low return of questionnaires from the disabled sample (35.8%) was not expected. Two important factors shown to influence a high return on posted questionnaires are the amount of spare time the respondent has to complete the form and the interest of the content to the respondents. Both these factors were assumed to apply to the disabled sample. In any case, the three questionnaires took only about half-an-hour to complete. It is the author's contention that for one reason or another, the disabled sample were unexpectedly apathetic. It would be interesting to do a follow-up study of those who did not return their completed questionnaires, investigating their self-acceptance, personality characteristics, sociometric ratings, etc. Another interesting possibility would be to compare these 'non-²returners' with the 'returners' on the ATDP.

It appears then, that it is necessary to do more than send out personal requests to disabled persons to elicit responses.

Disabled persons should be personally contacted and handed the questions. Another suggestion is that more persons with different disabilities be tested and compared.

Summary.

Do disabled persons, as a group, all have similar attitudes towards their disabilities and are they equally self-accepting? Or is it necessary to sub-divide the disabled group according to the type of disability because persons with different disabilities express different attitudes towards self? These are some of the questions, the answers to which are necessary in a successful rehabilitation programme. If there is no relationship between self-acceptance or self-rejection and type and extent of disability, the same rehabilitation techniques can be applied to every type of disabled person. Other important questions are: Should there be special programmes designed for young disabled persons and another for older disabled persons? Do males and females require the same rehabilitation measures?

Rehabilitation has always been associated with disabled and other persons who need to be restored to their fullest social, economic, physical, and mental capacity. In the last analysis, the quintessence of rehabilitation is concerned with improving the quality of a person's life. On the other hand, the chief cause of the disabled person's social and economic limitations - the negative or unfavourable attitudes of the non-disabled majority - have been given little attention. Only recently have there been active steps taken to 'educate' the public at large about the true nature of disability and disabled persons. Such a public education programme, if it intends to decrease unfavourable attitudes, cannot be

directed at the general public. Or can it? If research has shown that non-disabled males are less accepting of disabled persons than are non-disabled females, then different programmes are needed for males and females. Similarly, is a single programme for persons at different educational levels sufficient? To promote favourable attitudes towards disabled persons, is it necessary to increase the amount of contact with them or increase the enjoyment or make the contact volitional? What is the relationship among these? And so on.

This study is orientated to questions of this sort. The attitudes of non-disabled persons towards disabled persons and the attitudes of disabled persons towards their disability, and their self-acceptance or self-rejection were investigated. The attitudes of these two groups were measured by the Attitudes Toward Disabled Persons (ATDP) Scale (Yuker et al., 1960). The ATDP served as the independent criterion variable and it was hypothesized to stand on a number of relationships with certain independent predictor variables. These independent variables were obtained through two other questionnaires, a Personal Questionnaire (P.Q.) and a Personal Questionnaire re Handicapped Persons (PQ:HF). All three questionnaires were completed by each of 101 non-disabled subjects and 53 disabled subjects.

Key terms relevant to the study were defined.

The choice of hypotheses was dictated by previous empirical findings and by theoretical considerations. Previous attitudinal research on disability was reviewed. The majority of studies cited used the ATDP or a Bogardus-type Social Distance Scale or an Osgood-type Semantic Differential Scale. The review revealed many contradictory results. Whereas several investigators found the same

results to . . . a certain problem, several other investigators found the opposite results to the identical problem. H-6 to H-10, concerning the relationships with demographic variables and ATDP scores, were derived from previous research findings.

A number of theorists were cited as pertinent to this study. Heider's (1958) balance theory of sentiments was considered applicable to attitudes towards disability. His cases of similarity and familiarity state that a person tends to like another similar and familiar person. His opposite cases of dissimilarity and unfamiliarity state that a person tends to dislike another dissimilar and unfamiliar person. This suggests that disabled persons should have more favourable attitudes towards disability and disabled persons (and hence themselves) than non-disabled persons. H-1 aimed to test this assumption. H-2 was also derived from the assumption that a person tends to like another similar and familiar person.

Guttman and Foa (1951) and Rosenberg (1960) have suggested that frequency of contact is directly related to intensity of attitude regardless of whether the attitude content is positive or negative. H-3 aimed at testing this assumption.

H-4 was derived from the assumptions of Heider (1958), Homans (1951), Malewski (in Zetterberg, 1965), and Jacobson et al. (1960) who suggested various aspects of H-4 concerning frequency of contact and favourable attitudes.

Allport (1954), Cook and Selltiz (1955), and Newcomb (1956) have suggested that favourable attitudes tend to be related to the intimacy of contact. H-5 was aimed at testing this assumption. To this investigator's knowledge, this is a newly formulated hypothesis being tested for the first time.

Statistical procedures consisted of means, standard deviations, t-tests, analyses of variance, simple, partial and multiple correlations.

Table 47 presents a summary of all ten research hypotheses for the non-disabled and disabled samples. Whenever hypothesized or tested, the findings for males and females within each sample are also indicated. H-1 stated that disabled persons will express more positive attitudes on the ATDP scale than will non-disabled persons. The difference between means was in the hypothesized direction, though not significant, and so H-1 was considered unconfirmed. Nevertheless the disabled group, disabled males and disabled females had significantly more favourable attitudes than respectively, the non-disabled group who had had no contact with disabled persons, non-disabled males who had had no contact, and non-disabled females who had had no contact. In addition, all the disabled females had a significantly more favourable score than all the non-disabled females.

H-2 was confirmed in that there was no significant difference between the ATDP scores of persons with various types of disabilities.

H-3, stating that the more frequent the contact with disabled persons, the higher will be the scores on the intensity statements of the ATDP scale, regardless of whether the attitude content is favourable or unfavourable, was not confirmed. The disabled sample were in a positive direction, but the non-disabled sample were in a negative direction.

H-4 tested the assumption that higher frequency of contact with disabled persons will be associated with favourable

attitudes, if high frequency is concurrent with (a) ease of avoidance of contact, (b) enjoyment of contact, and (c) alternative rewarding opportunities. H-4 was not confirmed for either the non-disabled or disabled group. For both groups though, enjoyment was the most important variable contributing to favourable attitudes.

H-5 stated that the more personal the contact with disabled persons, the more favourable will be the attitudes towards them. This was only tested with the non-disabled group and was not confirmed, although their attitude mean scores tended towards the hypothesized direction. The total non-disabled group who had had some kind of personal contact with disabled persons as well as the non-disabled females who had had contact expressed significantly more favourable attitudes than respectively the total non-disabled group who had had no contact as well as the non-disabled females who had had no contact.

H-6 proposed that for both non-disabled and disabled groups, younger persons will express more positive attitudes on the ATDP than will older persons. This was confirmed only for the total non-disabled group and the non-disabled males.

It was hypothesized in H-7 that females within both non-disabled and disabled groups will have more favourable attitudes on the ATDP than males within both groups. H-7 was confirmed for the disabled males and females, but not for the non-disabled males or females.

H-8 stated that, for the non-disabled group, persons with a higher educational level will have more favourable attitudes towards disabled persons than persons with a lower educational level. Results did not support H-8.

H-9 stated that, for the disabled group, persons at different educational levels will obtain basically the same score on the ATDP. This was confirmed.

H-10 postulated that persons who score high on religiosity will score low on positive attitudes on the ATDP. For both groups the relationship between the combined religiosity variables and attitude scores was not significant and did not support H-10, which thus was not considered confirmed.

The ATDP was discussed at some length from different aspects. According to the Guttman sense of the term the ATDP was not scalable in that it appears to measure more than one content variable. It was suggested that this may account for many of the contradictory results. Jordan's (1968) facet analysis of the scale showed that it is, at best, a scale of verbal-symbolic-beliefs about the disabled. Siller and Chipman (1964) discovered a number of factors underlying the scale pointing to the multidimensionality of attitudes in general and of attitudes towards disabled persons in particular.

TABLE 47: Summary of hypotheses 1 to 10 indicating directionality and confirmation¹ for the two research samples.

Sample	H-1	H-2	H-3	H-4				H-5
	Group Differences	Disability Differences	Contact Frequency and Intensity	Contact Frequency and Favourableness	Am	En	Av	Al ²
<u>Non-disabled</u>								
Males	+	oo	+	o	o	o	o	+
Females	++	oo	--	o	o	o	o	+
Total	+	oo	-	++	++	--	-	+
<u>Disabled</u>								
Males	+	++	+	o	o	o	o	o
Females	++	++	+	o	o	o	o	o
Total	+	++	+	+	++	+	+	o

1 Codes: + = Positive direction of research hypothesis

++ = Significant difference in hypothesized direction or confirmation of research hypothesis ($p = .05$)

- = Negative direction of research hypothesis

-- = Significant difference in opposite hypothesized direction ($p = .05$)

o = Not hypothesized

oo = Not applicable

2

Am = Amount of contact

En = Enjoyment of contact

Av = Ease of avoidance

Al = Alternative rewarding opportunities

TABLE 47: (Continued)

Sample	H-6	H-7	H-8	H-9	H-10	
	Age Differences	Sex Differences	Education Differences	Education Differences	Religiosity and Favourableness	
					Im	Ad ³
<u>Non-disabled</u>						
Males	++	+	-	oo	o	o
Females	+	+	+	oo	o	o
Total	++	oo	+	oo	--	-
<u>Disabled</u>						
Males	+	++	oo	++	o	o
Females	-	++	oo	++	o	o
Total	-	oo	oo	++	+	-
<p>Codes: + = Positive direction of research hypothesis 3</p> <p>++ = Significant difference in hypothesized direction or confirmation of research hypothesis ($p=.05$) Im = Religions importance</p> <p>= Negative direction of research hypothesis Ad = Religious adherence</p> <p>- = Significant difference in opposite hypothesized direction ($p = .05$)</p> <p>o = Not hypothesized</p> <p>oo = Not applicable</p>						

It was demonstrated that the ATDP is susceptible to several kinds of response sets, such as bias, social desirability, and acquiescence. The problem of meaning or concept equivalence was felt to particularly influence responses on the scale and the recommendation was made that ambiguous terms or concepts be defined to avoid individual interpretation of the questions.

The underlying assumptions of the ATDP were questioned and conclusions similar to those of Bell (1962) and Palmerton (1968) were reached, that the ATDP measures attitudes of differences and similarities between disabled persons and non-disabled persons, but that these expressed differences and similarities cannot necessarily be interpreted as degrees of rejection or acceptance.

It is the author's opinion that the validity, reliability and general usefulness of the ATDP as reported by its originators, Yuker et al. (1960, 1966) could be improved by seriously considering the discussion about, and the suggested recommendations to the scale.

Certain recommendations were also made concerning the two research samples used in this study. Future research samples should be more representative. This applies particularly to non-disabled subjects in say, age and education variables. For disabled subjects a greater number should be investigated. Here the method of questionnaire administration and collection should be revised. Personal administration seems to be necessary to elicit a better return.

It is hoped that this may serve as a foundation as well as an exploratory study to future research in South Africa on the topic of this thesis.

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APPENDIX A.

1. Personal Questionnaire (PQ)
2. Attitudes toward Disabled Persons (ATDP)
3. Personal Questionnaire re Handicapped Persons (PQ:HP)

APPENDIX A-1.

PERSONAL QUESTIONNAIRE (PQ)

No. _____

Location _____

Male _____

Group _____

Female _____

Date _____

PERSONAL QUESTIONNAIRE.

This questionnaire has to do with personal information about you. Since the questionnaire is completely anonymous, you may answer all the questions freely without any concern about being identified. It is important to the study to obtain your answer to every question.

PERSONAL QUESTIONNAIRE.

Please read each question carefully and do not omit any questions.

Please answer by circling the correct answer (or answers) or fill in the answer as required.

1. How old are you? (Write age in box)

2. Are you male or female? (Write sex in box)

3. Where were you mainly reared or 'brought up' in your youth? (that is, up to the age of 15 or 16).

Country 1.

Country town 2.

City 3.

City suburb 4.

4. Where have you (or the main bread winner in your family) been employed during the past three years?

Country 1.

Country town 2.

City 3.

City Suburb 4.

5. Where have you mainly lived during the past three years?

Country 1.

Country town 2.

City 3.

City Suburb 4.

6. What is your marital status?

Married 1.

Single 2.

Divorced 3.

Widowed 4.

Separated 5.

7. How many children do you have? (Please write number in box)

8. Please answer either A or B, whichever applies best to your present situation. Please read both choices, then answer only one.

A. If you are self-supporting, about what is your total yearly income before taxes (or, if you are married, the total yearly income in the family). Include extra income from any regular source such as dividends, insurance, etc. Please write total in box

B. If you are not self-supporting (or, if you are married, if your family is not self supporting), what is the approximate total yearly income before taxes of the persons who mainly provide your support (that is, parents, relatives or others). Make the best estimate you can.

9. According to your answer to Question 8, about how does your income compare with that of most people in the total community where you live?

- Much lower 1.
- Lower 2.
- About the same ... 3.
- Higher 4.
- Much Higher 5.

10. How many brothers have you? (Please write number in box)

11. How many sisters have you? (Please write number in box)

12. About how does (or did) your father's income compare with that of most people in the community in which he lives (or lived)?

- Much lower 1.
- Lower 2.
- About the same 3.
- Higher 4.
- Much higher 5.

13. What is your religion?

- Catholic 1.
 Protestant 2.
 Jewish 3.
 None 4.
 Other (Please specify) _____ 5.

14. About how important is your religion to you in your daily life?

- I have no religion 1.
 Not very important 2.
 Fairly important 3.
 Very important 4.

15. Which social class do you believe you are in?

- Lower 1.
 Lower middle 2.
 Middle 3.
 Upper middle 4.
 Upper 5.
 Upper upper 6.

16. Which social class do you believe your father is (or was) in?

- Lower 1.
 Lower middle 2.
 Middle 3.
 Upper middle 4.
 Upper 5.
 Upper upper 6.

17. About how much education do you have (circle only one)?

- 3 years of school or less 1.
 6 years of school or less 2.

- 9 years of school or less 3.
- 12 years of school or less 4.
- Some college or university 5.
- A college or university degree 6.
- Some graduate work beyond the first degree 7.
- One or more advanced degrees 8.
- Other (Please note number of years of
study or diploma obtained) _____ 9.
18. About how does your education compare with that of most people?
- Much less than most 1.
- Less than most 2.
- About average 3.
- More than most 4.
- Much more than most 5.
19. About how does (or did) your father's education compare with
that of most people in his time?
- Much less than most 1.
- Less than most 2.
- About average 3.
- More than most 4.
- Much more than most 5.
20. What type of living arrangement do you have?
- Rent a house 1.
- Rent a flat 2.
- Rent a room (meals in a restaurant, etc).. 3.
- Rent a room with meals (boarding house,
etc.) 4.
- Own a flat 5.
- Own a house 6.

Other (please specify) _____ 7.

21. Please answer either A or B. Please read both before answering.

A. If you are renting the house in which you live, about how much money per month do you pay for rent? (Write amount in box)

B. If you own the house in which you live (house, flat or other) about how much money do you believe you could rent the house for? (Write amount in box).

22. How long have you lived in your present community?

Less than 1 year 1.

From 1 to 2 years 2.

From 3 to 6 years 3.

From 7 to 10 years 4.

Over 10 years 5.

23. Have you changed your residency (from one community to another) during the past two years? Please circle the correct answer.

Yes 1.

No 2.

24. Have you changed your employment during the past two years? Please circle the correct number.

Yes 1.

No 2.

25. About how many times have you changed residency (communities) during the past 10 years? Please circle the correct number.

None 1.

One time 2.

Two to three times 3.

Four to six times 4.

Seven to ten times 5.

Over ten times 6.

26. About how many times have you changed jobs during the past 10 years? Please circle the correct number.

None 1.

One time 2.

Two to three times 3.

Four to six times 4.

Seven to ten times 5.

Over ten times 6.

27. Please state your occupation. Briefly state the title or name of your job and the nature of your work.

28. In respect to your religion, about to what extent do you observe the rules and regulations of your religion? Please circle the correct number.

I have no religion 1.

Seldom 2.

Sometimes 3.

Usually 4.

Almost always 5.

29. Please state your type of disability

30. What is your home language?

English 1.

Afrikaans 2.

Other (please specify) _____ 3.

APPENDIX A-2

Attitudes Toward Disabled Persons (ATDP)

No. _____

Location _____

Male _____

Group _____

Female _____

Date _____

HANDICAPPED PERSONS SCALE.

Here you are asked to express your opinion on the following 20 statements. Make your answers refer to persons with physical handicaps, for example, persons who must wear surgical appliances, artificial limbs; to persons who limp seriously, who have missing, paralyzed or malformed limbs; to persons with defects which are obvious to a stranger but who are otherwise in good health.

Do not make your answers refer to the blind, deaf or persons with speech or heart defects.

HANDICAPPED PERSONS SCALE.

INSTRUCTIONS: Given below are 20 statements of opinion about physically handicapped persons. We all think differently about persons with physical handicaps. Here you may express how you think by choosing one of the four possible answers following each statement. These answers indicate how much you agree or disagree with the statement. Please mark your answer by placing a circle around the number in front of the answer you select.

You are also asked to indicate for each statement how strongly you feel about your marking of the statement. Please mark this part of your answer in the same way as before, by placing a circle around the number in front of the answer you select.

1. Parents of handicapped children should be less strict than other parents.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

2. Physically handicapped persons are just as intelligent as non-handicapped ones.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

3. Handicapped people are usually easier to get along with than most people

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

4. Most physically handicapped people feel sorry for themselves.

- | | |
|----------------------|----------|
| 1. Strongly disagree | 3. Agree |
|----------------------|----------|

2. Not very strongly 4. Very strongly
9. Most physically handicapped persons worry a great deal.
1. Strongly disagree 3. Agree
2. Disagree 4. Strongly agree
- About how strongly do you feel about your answer?
1. Not strongly at all 3. Fairly strongly
2. Not very strongly 4. Very strongly
10. Physically handicapped people should not be expected to meet the same standards as non-handicapped people.
1. Strongly disagree 3. Agree
2. Disagree 4. Strongly agree
- About how strongly do you feel about your answer?
1. Not strongly at all 3. Fairly strongly
2. Not very strongly 4. Very strongly
11. Physically handicapped people are as happy as non-handicapped ones.
1. Strongly disagree 3. Agree
2. Disagree 4. Strongly agree
- About how strongly do you feel about your answer?
1. Not strongly at all 3. Fairly Strongly
2. Not very strongly 4. Very strongly
12. Severely physically handicapped people are no harder to get along with than those with minor handicaps.
1. Strongly disagree 3. Agree
2. Disagree 4. Strongly agree
- About how strongly do you feel about your answer?
1. Not strongly at all 3. Fairly strongly
2. Not very strongly 4. Very strongly
13. It is almost impossible for a handicapped person to lead a normal life.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

14. You should not expect too much from physically handicapped persons.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

15. Physically handicapped people tend to keep to themselves much of the time.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

16. Physically handicapped people are more easily upset than non-handicapped people.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

17. Physically handicapped persons cannot have a normal social life.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

18. Most physically handicapped people feel that they are not as good as other people.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

19. You have to be careful of what you say when you are with physically handicapped people.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly |

20. Physically handicapped people are often grouchy.

- | | |
|----------------------|-------------------|
| 1. Strongly disagree | 3. Agree |
| 2. Disagree | 4. Strongly agree |

About how strongly do you feel about your answer?

- | | |
|------------------------|--------------------|
| 1. Not strongly at all | 3. Fairly strongly |
| 2. Not very strongly | 4. Very strongly. |

APPENDIX A-3

Personal Questionnaire re Handicapped Persons (PQ:HP)

No. _____

Location _____

Male _____

Group _____

Female _____

Date _____

PERSONAL QUESTIONNAIRE : HP

This questionnaire deals with your contacts with physically handicapped persons, and what you know about them. Perhaps you have had much contact with physically handicapped persons, or you may have studied about them. On the other hand you may have had little or no contact with physically handicapped persons, and may have never thought much about them at all.

For the purpose of this investigation, the answers of all persons are important, so even if you know very little or nothing about physically handicapped persons your answers are important.

PERSONAL QUESTIONNAIRE : HP.

Please read each question carefully and do not omit any questions. Please answer by circling the correct answer (or answers) or fill in the answer as requested.

1. Some physically handicapped conditions are listed below. In respect to these various handicaps, which have you had the most actual experience with. Please answer by circling the number of the group you select. Circle only one.

- | | |
|--------------------------------|---|
| 1. blind | 6. disfigured (such as severe burns or scars on face) |
| 2. partially blind | 7. Spastic (or cerebral palsy) |
| 3. deaf (and deaf mute) | 8. speech disorders |
| 4. partially deaf | 9. none |
| 5. crippled or amputated limbs | |

2. Which other groups have you also had some experience with? Please circle the number of each additional group with which you have had some experience

- | | |
|--------------------------------|---|
| 1. blind | 6. disfigured (such as severe burns or scars on face) |
| 2. partially blind | 7. spastic (or cerebral palsy) |
| 3. deaf (and deaf mute) | 8. speech disorders |
| 4. partially deaf | 9. none |
| 5. crippled or amputated limbs | |

If on the preceding question you indicated that you have had no personal experience with physically handicapped persons (by circling response No. 9) please skip questions 3 through 9. If you indicated that you have had experience with one or more of the above handicapping conditions, please answer questions 3 through 9.

3. The following questions have to do with the kinds of experience you have had with physically handicapped persons. Please circle the number of each experience that applies to you. If more than one experience applies, please circle a number for each experience that applies.

- I have read or heard a little about physically handicapped persons 1.
- I have studied about physically handicapped persons through reading, movies, lectures or observations 2.
- A friend is physically handicapped 3.
- Some relative is physically handicapped 4.
- I have personally worked with physically handicapped persons,

as a teacher, counsellor, volunteer, child care
etc. 5.

My father, mother, brother, sister, wife (husband)
or child is physically handicapped 6.

I, myself, have a physical handicap. (Briefly please
indicate the kind of handicap) 7.

4. Considering all the times you have talked, worked, or in some way had personal contact with physically handicapped persons, about how many times has it been altogether? Please circle the number of the single best answer.

Less than 10 occasions 1.

Between 10 and 50 occasions 2.

Between 50 and 100 occasions 3.

Between 100 and 500 occasions 4.

More than 500 occasions 5.

5. When you have been in contact with physically handicapped people, how easy for you, in general, would it have been to have avoided being with these handicapped people?

I could generally have avoided these personal contacts only at great cost or difficulty 1.

I could generally have avoided these personal contacts only with considerable difficulty 2.

I could generally have avoided these personal contacts but with some inconvenience 3.

I could generally have avoided these personal contacts without any difficulty or inconvenience 4.

6. During your contact with physically handicapped persons, did you gain materially in any way through these contacts, such as being paid, or gaining academic credit, or some such gain?

No, I never received money, credit or any material gain 1.

Yes, I have been paid for working with handicapped persons 2.

Yes, I have received academic credit or other material gain 3.

Yes, I have been paid and received academic credit 4.

7. If you have never been paid for working with handicapped persons go on to the next question. If you have been paid about what percentage of your income was derived from contact with physically handicapped persons during the actual period when working with them?

Less than 10% 1.

- Between 10 and 25% 2.
- Between 25% and 50% 3.
- Between 50% and 75% 4.
- More than 75% 5.
8. How have you generally felt about your experiences with handicapped persons?
- I have definitely disliked it 1.
- I have not liked it very much 2.
- I have liked it somewhat 3.
- I have definitely enjoyed it 4.
9. If you have ever worked with the physically handicapped for personal gain (for example, for money or some other gain), what opportunities did you have (or do you have) to work at something else instead; that is, something else that was (or is) acceptable to you as a job?
- I do not know what other jobs are available or acceptable 1.
- No other job was available 2.
- Other jobs were not at all acceptable to me 3.
- Other jobs were not quite acceptable to me .. 4.
- Other jobs available were fully acceptable to me 5.

