A NATURALISTIC INVESTIGATION OF COMMUNITY ADJUSTMENT OF FACIALLY DISFIGURED BURNED TEENAGERS

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A Dissertation Preserted to the Faculty of the D-partment of Feychology University of Mouston

In Partial Fulfillment of the Requirements for the Degree Doctor of Fhilosophy

> By . Reinhard W. Rönnebeck December, 1972

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An Abstract of a Dissertation

Presented to

the Faculty of the Department of Psychology

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ABSTRACT

The purpose of the study was to determine the effects of facial disfigurement, resulting from severe burns, on the community adjustment of teenagers. The study was conducted within the theoretical framework of ecological psychology. A behavior setting survey was carried out, using daily records of the subjects' activities away from home. over a continuous 4-week period. The subjects served as their own data collectors; and the experimental subjects selected. according to a number of criteria (and subject to the approval of the investigator), their own control. The sample included a group of twenty-two facially disfigured burned teenagers, and a matched, nondisfigured control group, Similarities and differences were explored between the two groups along nine major descriptive variables. A factor analysis of the intercorrelations between various measures employed was conducted.

The major findings were:

(a) Comparisons were made separately for male and female subjects. Of the resulting 96 comparisons, 12 (12.5 %) yielded statistically significant differences, of these, 10 significant differences occurred among male subjects. In the light of these results, the common-sense assumption that attractive appearance would be more important to female teenagers must be questioned.

(b) Disfigured males venture less, range less widely, and spend less time in certain types of settings, and disfigured males compensate by reentering the same settings more often and spending more time in them.
(c) Facial Disfigurement appears to make less difference in the community participation of the female.
(d) Results of the exploratory factor analysis suggest that several measures seem to be intercorrelated. Specifically, the number of different settings entered seem to be positively correlated with the number of entries into settings and the number of varieties formed by settings entered, and negatively correlated with the number of entries per setting and amount of time per setting.

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CHAPTER I

INTRODUCTION

The purpose of the present study was to determine the effects of facial disfigurement, resulting from severe burns, on community adjustment of teenagers.

Increasingly, death and injury are the results of man-made causes as opposed to diseases and forces of nature. "Accidental injuries have become the leading cause of death in young people - not because accidents have been on the increase, but because other causes of death have decreased" (Iskrant & Joliet, 1968, p. 88). Fires and explosions are the third leading cause of accidental death and injuries in the U.S. (Iskrant & Joliet, 1968).

Burns deserve special consideration not only because of their devastating effects, but because they typify, par excellence, injuries which can be averted and yet outrank all other causes of injuries and accidental death during childhood and adolescence. About 30,000 children are hospitalized each year because of burns and 1787 such children died in 1967 (Iskrant & Joliet, 1968).

The rate of occurrence, however, cannot adequately assess the extent of the injuries which result from burns. For example, Artz (1969) has pointed out that severe emotional disturbances can result from very concretely losing contact with reality during the necessarily prolonged and repeated treatment procedure for burns. The burned patient may virtually lose touch with reality because of (a) bulky dressings enclosing most of the body, (b) edema of the eyelids which may rapidly close the eyes, (c) fluid collection in the ears which impairs hearing, (d) edematous interference with smell and taste, and (e) prolonged immobility and unusual posture as result of traction.

Despite these facts, systematic, experimental studies of persons recovering from and adjusting to these serious injuries are rare. Possible reasons for the scarce professional interect in the psychological aspects of burned children might involve (a) the great and obvious suffering which may be too disturbing to work with (Long, 1961), (b) the problem of finding a population of seriously burned children who survived (Schmitt, 1971), and (c) an unawareness of the importance of psychological factors during recovery and adjustment (Seligman, 1971).

The present investigation represents a systematic exploration of the adjustment style of persons who are facially disfigured as result of burns. Specifically, possible differences in community adjustment between facially disfigured and nondisfigured teenagers are investigated. The method employed originated with ecological psychology (Barker, 1968; Wright, 1969). The following considerations have prompted the study: (a) the incidence of seriously affected burned children, (b) the paucity of research related to this population, (c) the investigator's

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personal acquaintance with the work of Schmitt (1971), and (d) the unique opportunity presented by the investigator's psychological internship at the University of Texas Medical Branch at Galveston, Texas of which the Shriners Purns Institute is a part.

The literature relevant to burned children has been reviewed comprehensively by Schmitt (1971), who delinested a number of psychological factors <u>preceding</u> burns. The literature emphasizes three kinds of burned children: (a) the child of chance, (b) the impulsive child (e.g., long & Cope, 1961), and (c) the child of mentally disturbed parents (e.g., Seligner, 1970).

Although most burn accidents are preventable (Hopkins, 1962) a certain number of these will occur not as the result of the behavior of the victim or his companions, but because of chance factors. The child of chance was burned because of chance factors.

The relationship between hazard and accident may possibly depend more on the child's self-control than environmental protection. For example, Lorg and Cope (1951), who investigated emotional problems in burned childman, found through mother interviews that impulsive behavior was present in mine of their total of 19 children. The impulsive child typically acts on the spur of the moment.

Other investigators (e.g., Selignar, 1970) suggest that the occurrence of some burn accidents with children are related to

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emotional problems of their parents. Apparently, it is assumed that some parents unconsciously facilitate the occurrence of burn accidents in their children.

Generally, it seems that most studies of burned children are conducted by investigators of a psychoanalytic persuasion, with the result that they emphasize unconscious processes and the psychopathology of everyday life as principle factors. Schmitt (1971) has noted that to accept these studies as valid would mean accepting the view that no burn is truly accidental, but is a function of unconscious motives on someone's part.

Psychological factors <u>concomitant</u> with burns and their treatment can be classified into early, middle, and late phases (Bernstein, Sanger, & Fras, 1968). During the <u>early</u> phase, survival is the prevailing concern for the burned child and those responsible for him. Because of intense physical crisis, this period, more than at any other, may lead to potential overindulgence of the patient. During the <u>middle</u> phase of treatment, objectionable behavior of the child begins to be less accepted by hospital staff and other responsible agents. Therefore, this phase is generally thought to be a time when many burned children begin to show signs of depression. The <u>late</u> treatment period is characterized by an impatient waiting for discharge by patient and relatives alike. Conflicts of self-reliance and support are typical for this phase.

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Studies of the hospital experience of acutely burned children agree that these patients are exceedingly difficult to manage. It has been pointed out (Bernstein, Sanger, & Fras, 1968) that probably no other type of nursing care involves so much painful treatment. Commonly, burned children misinterpret the inflicting of pain as punishment. Because associations are formed among pain, punishment, and punisher, the child may become uncommunicative and withdrawn. Regression and depression are common results of these experiences. There are few research findings available which focus on the plight and the reactions of the family and staff of burned children.

Several psychological factors <u>following</u> the treatment phases have been described: (a) Children show a significantly higher incidence of emotional disturbance (Woodward, 1959; Woodward & Jackson, 1960). (b) Children will imitate parental attitudes toward their body (Watson & Johnson, 1958). (c) They give evidence of long-lasting and wide-ranging effects on the victim as well as mothers (Vigliano, Hart, & Singer, 1958). Schmitt (1971) questions whether the problems correlated with burned children predate the accident or derive therefrom; i.e. whether they are causes or effects. This points to a problem common to research in disabilities.

An investigation by McGregor, Abel, Bryt, Lauer, and Weissman (1953) is probably the most comprehensive study undertaken so far about the psychological aspects of facial

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deformities. It represents a longitudinal study of over 2½. years. These authors focused on the effects of plastic surgery on adjustment. The study was conducted by an interdisciplinary team consisting of a sociologist, two psychologists, a psychiatrist, and an anthropologist. The 74 subjects of the investigation were referred for facial reconstructive surgery in New York City and represented variations in facial disfigurement, age, and cultural background. The procedures consisted of interviews with the patients by a sociologist as well as the psychiatrist, the administration of a battery of psychological tests by one of the two psychologists, and visite by a home investigator.

Each subject was first interviewed by the sociologist (a) to motivate the patient to participate in the study, (b) to obtain extensive life history, and (c) to assess the role the facial deformity played in the subject's life. Subsequently, a psychologist administered a battery of tests, including the Rorschach, the Wechsler-Bellevue, Thematic Apperception Test, and human figure drawings. Approximately 3 months after surgery, the subjects were retested by the same psychologist. Preceding surgery, a psychiatrist interviewed the patient to discuss his reasons for seeking surgery and to help the patient understand the extent to which his expectations would be satisfied. A home investigator visited the patient in his home and school to observe his relationships with parents, siblings, teachers, and neighbors before and after surgery.

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The findings of McGregor et al. (1953) suggest that since there rarely exists a handicap in terms of physical performance for the facially disfigured person, psycho-social factors play a primary role in creating problems for him. The attitudes and prejudices that the society entertains for those with disfigured faces may be as significant and destructive as any medical considerations or disease. Aversions for the facially disfigured often constitute formidable obstacles to close social interactions. The authors emphasize that many opportunities are denied the facially disfigured. The extent of social participation, employment, prestige, role and status, and interpersonal relations are influenced and changed.

The investigators spell out a number of social forces which place the facially disfigured at a disadvantage: (a) the societal emphasis on youthful appearance and physical attrativenesse; (b) the emphasis on conformity, including physical appearance; (c) folklore and superstitions relating facial disfigurement to deserved punishment, or incest; and (d) stereotyping, as for example in relating appearance to intelligence and personality, usually negative in nature and stigmatizing in effect. Fundamentally, it was stressed that the patient's attitude toward himself is a reflection of the attitudes and prejudices of the society in which he lives.

HcGregor et al. (1953) reach several conclusions from their study. A marked personality difference emerges between mildly

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and severely disfigured subjects. Specifically, "the severely disfigured complained less bitterly than the mildly disfigured. ... on the whole, the severely disfigured patient complained less, was more passive or repressed, and perhaps more resigned. He seemed more concretely aware that others would accept his complaints as valid. This was not true of the more mildly disfigured patient" (p. 209). In addition, the investigators emphasize that the reported differences in attitude and response style among patients was seen primarily as a function of the unique quality in personality of each.

The authors report that the optimum age for a corrective plastic surgery is before the age of six and that "definite detrimental consequences seem to occur if the child's deformity persists into puberty" (p. 213). The reason for this is seen in the heavy demands of heterosexual integration in adolescence.

Another longitudinal study, using the ecological approach of Wright (1969), was conducted by Schmitt (1971). Schmitt investigated the community adjustment of eight facially disfigured burned children between 6 and 12 years of age. The subject's mother served as data collector, using deily record sheets with four categories for each of the subject's activities over a continuous 4-week period. The mothers of the experimental group also recruited the mothers and children of the control group to form matched-pairs. Similarities and differences between the

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facially disfigured subjects and a matched, nondisfigured control group were explored for nine descriptive variables.

Although there were no more statistically significant differences between the two groups than would be expected by chance, the study is important for the internally consistent pattern that emerged and for the methodology employed. Schmitt's pattern of findings suggests:

- A greater frequency of experience for the nondisfigured group in settings which are farther from home, but for the disfigured group in settings which are within the neighborhood;
- (2) A greater variety in settings experienced by the nondisfigured group;
- (3) More repetition of experience in formal settings for the nondisfigured group, and in informal settings for the disfigured group;
- (4) A greater amount of tire spent in formal settings
 by the nondisfigured group, but for the disfigured in informal settings;
- (5) The disfigured group tends to be accompanied more frequently in formal settings than the nondisfigured group.

Schmitt points out that the overall pattern of rear differences was "that the nondisfigured group maybe more venturesome, but the disfigured group compensates for less breadth of

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experience by maximizing depth of experience" (abstract). And he suggests "that the near differences obtained during preadolescent years for the disfigured group will be manifested with greater clarity during the adolescent years" (p. 94). Furthermore, in view of the findings of McGregor et al. (1953) that "definite detrimental consequences seem to occur if the child's deformity persists into puberty" (p. 213) an investigation of an adolescent population would seem especially desirable.

The present study focusses on an adclescent, facially disfigured, burned population and is a follow-up to Schmitt's. The subject population, and to some extent the methodology, have been modified as described in Chapter II. The subjects were not primary school age children but teenagers, i.e. the 13 to 19 years age group. In addition, each subject functioned as his own data collector. It is hoped that the present study will help answer the prevalent question of parents and hospital staff: "What will happen when these children become older; will they lead normal lives"? It is assumed that taking part in a variety of activities and being involved with people goes a long way towards leading normal lives.

CHAPTER II

STATEMENT OF THE QUESTIONS, METHOD, AND PROCEDURES

The general purpose of the present study was to determine whether facially disfigured burned teenagers differ from nondisfigured peers in the extent and type of their community adjustment. Whereas Schmitt (1971) studied a 6-to-12-year age group, the present study investigated a teenage population consisting of 13-to-19-year-old, postpubertal subjects.

The need to establish empirically the degree of community adjustment of burned teenagers is a specific example of the general need to study the relationships between the individual and his environment, i.e., to use the ecological approach. The present study was conducted within the theoretical framework of ecological psychology as propounded by Earker, Wright, Meyerson. and Gonick (1953), Barker (1965; 1968), Willems (1965), Willems and Raush (1969), and Wright (1969). Goffman (1963) has concluded that facial disfigurement can be stigmatizing and detrimental to interpersonal relationships. McGregor et al. (1953) reached a similar conclusion in their investigation. The present study is based on the assumption that to a large extent life consists of going places and doing things together with other people, and that the type of behavior exhibited is highly related to the behavior setting in which it occurs. The extent of participation in community activities of facially disfigured persons, despite of stigma and devaluation, is an indication of adjustment to life.

Definitions of Terms

A number of terms which have specific meaning within the framework of ecological psychology will be used throughout the study and are defined as follows:

Pehavior Setting: "... a naturally bounded physical and social assembly together with an attached standing pattern of human behavior. The assembly has distinguishing attributes of place, time, things, and inhabitants that both surround and support the behavior pattern. The pattern. on its side, is extra-individual inasmuch as it stays essentially the same while different inhabitants come and go; it is a phenomenon of persons en masse. The assembly and the behavior pattern are mutually fitting or synomorphic; they are adapted in form to one another. The inhabitants all stand in dual position. Each is an Instrument of the extra-individual behavior process and yet each is an executor of his own needs. It is. further. cnly in the first of these positions that any inhabitant belongs to the setting as such. Each is otherwise a free agent in a field of action that he enters and acts upon and that acts upon him (Wright, 1969, p. 18)."

<u>Variety</u>: Behavior settings are grouped according to similarities into varieties, according to criteria as developed by Barker and Wright (1955) and Wright (1969). Examples of varieties are grocery stores, restaurants, indoor entertainments, etc.

Scope: The number of separate behavior settings entered by the subject.

Heterogeneity: The number of separate varieties formed by the settings entered by the subject.

Motility: The frequency of visits to these behavior settings, i.e., the total number of visits to all settings.

<u>Occupancy</u>: The total amount of time spent in all behavior settings.

Reentrance Rate: The number of visits per setting.

Time Cumulation: The time amassed per setting, i.e., the average time per setting.

Dispersion: The number of different settings entered per variety.

<u>Penetration</u>: The absolute and relative frequencies of participations at different performance levels in entered settings (Wright, 1969, pp. 212-213). Examples of different penetration levels are bystander or follower, member or customer, joint leader, etc.

Formal Settings: The distinction between formal and informal settings originated with Schmitt (1971), who defined formal settings as settings which are scheduled, supervised, and manned.

Informal Settings: Settings which do not meet one or more of the criteria for formal settings. Activities whose primary purpose is play or socialization are examples of informal behavior settings.

<u>Companions</u>: Others who move with or stay with the subject (Wright, 1970). A friend who accompanies a subject on a shopping trip would be an example of a companion; however, the salesperson would not be a companion.

Statement of Questions

Although the present study is designed to pursue a line of research initiated by Schmitt (1971), dealing with the degree and type of participation in behavior settings away from home of a population of facially disfigured burned teenagers, the two studies differ in a number of ways: (a) Unlike Schmitt's focus on primary school age children, the present investigation focusses on teenagers. It was reasoned that if there exist differences in community adjustment between a facially disfigured and nondisfigured group, these differences are likely to be accentuated in a population of adolescents. (b) Because of presumably greater independence, maturity, and education of teenagers when compared to primary school children, subjects were their own data collectors in the present study. An additional reason the subjects recorded their own data was the possibility that adolescents - in their formative years of establishing independence and identity - may volunteer more information on their own than if they must report through their mothers. Stuart (1972) has used this method successfully with college students. (c) Although Schmitt's work represents an intensive investigation of the activities of 8 disfigured subjects, the present study is based on the data of 22 disfigured subjects. Increasing the sample size should increase the power of statistical tests.

The following questions were posed for the study. These parallel those of Schmitt (1971) in order to enhance meaningful comparisons between the two investigations.

First Question (<u>Scope</u>): For formal as well as informal settings, are there differences between the disfigured and nondisfigured groups in the number of entered settings? Do differences exist when the entered informal settings are further separated into indoor settings and outdoor settings?

Second Question (<u>Motility</u>): For formal as well as informal settings, are there differences between the disfigured and nondisfigured groups in the number of entries into settings? Do differences exist when the number of entries into informal settings are differentiated as indoor settings and outdoor settings?

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Third Question (<u>Companions</u>): For formal as well as informal settings, are there differences between the disfigured and nondisfigured groups in the number of entries into settings with specified kinds of companions? Five categories of companions were employed: alone, younger age, peer, adult, and combinations of younger age, peer, and adult. Any person less than 13 years of age was defined as younger in age.

Fourth Question (<u>Reentrance Rate</u>): For formal as well as informal settings, are there differences between the disfigured and nondisfigured groups in the number of visits per setting? Do differences exist when the visits to informal settings are further separated into indoor settings and outdoor settings?

Fifth Question (<u>Heterogeneity</u>): Are there differences between the disfigured and nondisfigured groups in the number of separate varieties of formal settings they enter?

Sixth Question (<u>Dispersion</u>): Are there differences between the disfigured and nondisfigured groups in the number of different formal settings entered per variety?

Seventh Question (<u>Occupancy</u>): For formal as well as informal settings, are there differences between the disfigured and nondisfigured groups in the total amount of time spent in all entered settings?

Eighth Question (<u>Time Cumulation</u>): For formal as well as informal settings, are there differences between the disfigured and nondisfigured groups in the average amount of time amassed per entered setting?

Ninth Question (<u>Penetration</u>): For formal as well as informal settings, are there differences between the disfigured and nondisfigured groups in the number of times they participate in settings at the various levels of penetration? For formal settings, six penetration categories were used: (a) bystander or follower, (b) spectator or guest, (c) member or customer, (d) special participant, (e) joint leader, (f) single leader. For informal settings, three penetration categories were employed: (a) passive, (b) active, physical, (c) active, verbal.

Subjects

The subjects were between 13 and 19 years of age. In order to have an approximate control for intelligence, all subjects selected were in the school grade appropriate for their age unless the delay was due to prolonged hospitalization. Black or Chicano subjects were excluded from the study to avoid the confounding of differences by these diverse cultural backgrounds. The subject population of 44 consisted of an <u>experi-</u> <u>mental</u> group of 22 teensgers who had been reconstructive patients of the Shriners Burns Institute, Galveston Unit, as well as a <u>matched control</u> group of 22. The experimental subjects were at least six months beyond treatment for acute burns. Using criteria established by McGregor, Abel, Bryt, Lauer, and Weissman (1953), 19 experimental subjects had "marked" disfigurations and 3 subjects had "gross" disfigurations, thus

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excluding the "slight" and "moderate" categories. With the exception of one matched pair, all subjects had both parents living at home and had maintained their present residence at the same address for at least 6 months. Twenty subjects were female and 24 subjects were male. Every attempt was made to exclude subjects who had functional impairments, regardless of etiology.

The criteria for inclusion of a subject in the control group were identical to those of the experimental group with the exception of the absence of facial disfigurement. Each experimental subject together with his parents selected a matched control subject from their community, who was of the same age, sex, grade in school, and socio-economic class. After such a selection was approved by the investigator the experimental and control subjects constituted a matched pair. Similar to Schmitt's (1971) work, the matched subject typically was a friend or neighbor of the experimental subject. Social class variables for matching were assessed on the basis of education and occupation of the parents (Hollingshead & Redlich, 1958). Demographic differences between the two groups were minimal, as indicated by Table 1.

Subject Recruitment

Potential subjects for the experimental group were identified by means of the medical records. All patients who had facial disfigurements, who met the age requirement, and who had

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| TABLE | 1 |
|-------|---|
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DEMOGRAPHIC CHARACTERISTICS OF THE DISFIGURED AND NONDISFIGURED GROUPS

| | Disfigured (N=22) | Nondisfigured (N=22) |
|--|-------------------------------------|--|
| Distribution of the number of subjects by social class* I II III IV V Total N | 3 1 3 12 <u>3</u> 22 | 3 1 3 12 <u>3</u> 22 |
| Mean age of subjects Mean education of subjects Mean education of father Mean education of mother Mean length of residency at present address | 9.81 12.45 11.45 9.41 | 15.87 9.81 13.09 10.90 10.86 |

* I signifies highest class V lowest class

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been treated at the Shriners Burns Institute since its founding in 1966, were considered as possible subjects. The parents and the potential subjects were contacted by letter and provided with a manual to inform them of the general purpose and methodology of the study and to obtain their consent for participation. The parents and the subjects were informed that the study might be submitted for scientific publication, but that anonymity would be insured. They were urged to discuss participation in the study with all family members living in the household prior to giving their written consent. In order to find a sufficiently large experimental group, any potential subject who resided within the continental United States was considered for participation. All former patients of the Shriners Burns Institute, Galveston Unit who met the criteria for experimental subjects and who were willing to participate, were included in the present study; a final total of 22 experimental subjects participated. The recruitment of the matched control group was initiated by the parents and subjects in the experimental group in accordance with consultations with the investigator. A nearly equal number of patients of the Institute reside outside of Texas. Consequently, it was not possible to establish a personal acquaintance with the subject and his family. However, a standing invitation to the subject and his family to discuss any questions with the investigator via collect telephone calls. and by weekly written feedback from the investigator was aimed

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at facilitating closer contact.

Collection of Data

Within the framework of ecological psychology, a number of different methods of data collection are possible. Variations occur in terms of who is the data collector (such as the investigator, a trained layperson, or the subject himself) and in terms of the methods of data recording (recollection lists or recognition lists). Some investigators (Pablant & LeCompte. 1971) have used checklists which require of the subject to check only those items that are recognized as applicable. Such a recognition checklist probably requires the least effort on part of the subject, although initially the checklist is compiled by the investigator on the basis of recollection lists. On recollection lists, only general categories are provided by the investigator, with the subject filling in the details. Other investigators have used recollection lists (Wright, 1969; Schmitt, 1971). Stuart (1972) studying the adjustment of students with wheelchairs, has used subjects as their own data collectors. Stuart provided the subject with small record booklets to be carried along so that data could be recorded in them immediately. Pablant and LeCompte (1971) have demonstrated that laypersons can be reliable data collectors if provided with clear instructions and a short period of training.

In the present study, the subjects were the data collectors and they recorded data on convenient, small forms. Recollection

lists were used. The subjects were encouraged to have these forms easily accessible at all times and to record the data as soon as was feasible. The subjects were advised not to wait with the recording of one day's data until the evening, but were permitted to do so if it was necessary. The subjects were required to record each activity away from home. for each day for a continuous 4-week period. Each subject was provided with a manual for recording the data (Appendix B), and he received additional explanations via telephone prior to the data collection. Subsequently, a two-day trial period constituted an additional training phase. Any time during the collection of data, the subject or his family had unlimited free telephone access to the investigator to answer possible questions. The subjects were instructed to mail the data sheet for each day on the following morning by means of an addressed and stamped envelope supplied by the investigator. A separate record form was used for each day.

A sample of the manual and forms given to each subject appear in the appendix B. The subjects were asked to supply the details for each activity away from home in four categories. These categories were: type of activity, location of activity, time cumulation, and companions. In addition, the subjects were requested to rate the completeness of their recording. The completeness ratings were obtained through a numerical 3-point scale for activities (1) fully recorded, (2) moderately complete, and

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(3) quite incomplete, with the appropriate number to be encircled by the subject on each daily record form. In retrospect, it seemed advisable to divide the category for type of activity into two: (a) what the subject did, and (b) what part he played in the activity (penetration). The provision of the additional category for penetration quite likely would have reduced the number of telephone inquiries and increased the accuracy of the recordings.

The success of the investigation largely depended on the goodwill and interest of the subjects. To ensure this. it was considered essential that some time before or during the early part of the data collection, each subject had talked personally via telephone with the investigator. Usually because of some question by the subject or the investigator, either one initiated that contact. Daily instead of weekly mailing of the record forms to the investigator was thought to increase the subjects' awareness of prompt, reliable recording and, in addition, to serve as a check for the investigator, who could promptly contact a subject if a delay in mailing the data seemed apparent. Furthermore, at four points during the period of data collection, each subject was contacted by letter in order to make him aware that his work was considered vital and was being followed closely. In addition, these letters served as a means of clarifying the most common questions that arose, such as to the detail of an activity (e.g., need to list each store entered

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in a shopping center), the degree of involvement (e.g., observed or played at a ball game), and the distinction between a companion and, for example, a colleague on a part-time job. At the end of the data collection, the importance of the subjects' contributions were stressed again and they were informed of the general findings.

Data Analysis

Each visit to a behavior setting, as recorded over the 4-week period of data collection, received a numerical code according to lists for each of the following categories: (a) subject's name, (b) variety, (c) setting, (d) occupancy time, (e) peretration, (f) companion, and (g) date. Each list was designed to include all possible entries for each of these categories prior to the coding process with additional entries available for those not anticipated. These comprehensive lists constituted the coder's manual (Appendix A) and were based to a large extent on those previously used by Wright (1959), and Schmitt (1971), who conducted similar behavior setting surveys. If the delineation of one setting from another was in question, a 7-point rating for each of seven criteria could be carried out (Wright, 1955).

With the exception of penetration scores, all the data analyzed consisted of interval data. Penetration scores represented frequency data. T-tests for correlated samples were used with all interval data to compare the disfigured and nondisfigured

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groups. The Wilcoxon matched-pairs signed ranks tert was used for the analysis of the penetration dimension. For all measures, the significance level chosen was .05 for two-tailed tests.

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CHAPTER III

RESULTS

Reliability Studies

Three analyses of reliability were carried out. These analyses focussed on (a) subjects' confidence in their recordings, (b) an unobtrusive measure of agreement between various subjects who listed each other as companions, and (c) a measure of agreement between two independent coders of the subjects' recordings.

The subjects' confidence measures were obtained from their daily recordings, which included three-point "completeness ratings". The subjects were instructed to encircle <u>1</u> if they considered their daily recordings complete, <u>2</u> if moderately complete, and <u>3</u> if incomplete. As Table 2 indicates, the subjects had a remarkable degree of confidence in their recordings with the rating <u>3</u> or no rating occurring for only 12 % of the recordings. This high degree of confidence was also consistently noted by Wright (1969), and Schmitt (1971).

The fact that each experimental subject selected his own control (dependent on the approval of the investigator) created the opportunity for an unobtrusive measure of reliability. Frequently, a subject selected a friend in the neighborhood or a classmate with whom some of the activities were shared. This

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TABLE 2

SS COMPLETENESS RATINGS RELIABILITY STUDY

| | Experimental Ss (N = 22) | | |
|-----------------|--------------------------|---------|--|
| Type of Rating* | Number of Ratings | Percent | |
| 1 | 362 | 58.29 | |
| 2 | 178 | 28,66 | |
| 3 . | 38 | 6.12 | |
| none | 43 | 6.93 | |
| | 621 | 100.00 | |

Control Ss (N = 22)

| Type of Ra | tings* Number | of Ratings | Percent |
|-------------------|---------------|------------|---------|
| 1 | | 391 | 62.77 |
| 2 | | 163 | 26.16 |
| 3 | | 32 | 5.13 |
| none | | 37 | 5.94 |
| | | 623 | 100.00 |

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* 1 = fully complete 2 = moderately complete 3 = quite incomplete none = subject made no ratings

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allowed for a measure of how accurately each subject of the matched pair included the other in his recording and described their shared activities. All activities listed by one subject of the matched pair as shared with the other were compared to the actual recording of these potentially shared activities by both of them. The ratings of four randomly chosen matched pairs formed the basis for an analysis of the degree of agreement between these subjects' recording of their shared activities. Table 3 gives an account of this reliability measure. It is apparent that the percent of agreement is quite adequate.

Finally, a reliability analysis of the agreement between two independent coders who translated the subjects' data into categories with numerical codes was conducted. Percent of agreement between the two independent coders was calculated by the formula $100 \ge \frac{2}{\text{sum XY}}$, where "sum XY" is the total number of ratings where the analysts are in agreement; "sum X + sum Y" are the total number of ratings identified by the coders. This analysis was performed for all measures with the exception of time cumulation, which was accepted on face value. The complete record of two randomly chosen subjects, one disfigured and one nondisfigured, was coded independently. Table 4 indicates satisfactory levels of agreement for all categories. Since the type of activity and level of penetration were recorded by the subject in a single column on the record form, occasional ambiguities resulted which left room for interpretations by the coders.

| | TA | BLE | 3 |
|--|----|-----|---|
|--|----|-----|---|

RELIABILITY STUDY OF AGREEMENT BETWEEN RECORDINGS OF FOUR PAIRS OF SUBJECTS INVOLVING PARTICIPATORY ACTIVITIES

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| Subject Pai Numbers | r Potential Participatory Activities | Actual Participatory Activities | % Agreement |
|------------------------|--|---------------------------------------|-------------|
| 03 & 63 | 12 | 9 | 75.00 |
| 06 & 60 | 43 | 37 | 86.04 |
| 08 & 62 | 24 | 17 | 70.83 |
| 24 & 72 | 39 | 32 | 82.05 |

Note. - Potential participatory activities = Total N of activities including the other subject of a pair as recorded by one of them. Actual participatory activities = Total N of participatory activities where both subjects are in agreement that the activities included each other.

TABLE 4

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RELIABILITY STUDY OF CODING BEHAVIOR SETTINGS USING CODERS X AND Y

| Code | (X + Y) | (11) | % Agreement |
|-------------------|---------|------|-------------|
| Formal Settings - | 67 | 67 | 100 |
| Informal Settings | 10 | 10 | 100 |
| Varieties | 77 | 71 | 92 |
| Entered Settings | · 77 | 77 | 100 |
| Penetrations | 77 | · 57 | 74 |
| Companions | 77 | 61 | 79 |

Note. - (X+Y) = Total N of ratings across coders; (XY) = Total N of ratings where coders are in agreement.

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The relatively low percent of agreement for the penetration category is an expression of these ambiguities. In general, further refinement of the subjects' manual and record forms should increase the ease of recording the activities and the accuracy of coding. An example of the further refinement of the record form would be the addition of a separate column for penetration after the activity column.

Evaluation of the Questions

Comparisons were made between the facially disfigured and nondisfigured groups for the nine major questions posed. All questions pertained to descriptive data on behavior in natural settings.

Scope

The first question asked whether there were differences between the disfigured and nondisfigured groups in the number of different settings entered. Table 5 gives an account of these data. The comparison for the mean sum of formal settings for males reached the two-tailed significance level of .05, with the nondisfigured males showing a significantly greater mean sum of different settings entered. The comparison for informal indoor settings yielded no significant differences for either males or females. However, the comparison for informal outdoor settings for males reached the significance level, favoring the nondisfigured group, while the same comparison for female subjects yielded no significant difference.

MEAN SUM OF DIFFERENT ENTERED SETTINGS (SCOPE)

| Disfigured | Nondisfigured | t-value | đ |
|------------|---|---|--|
| | | | |
| 19.00 | 26.41 | 2.58 | •02* |
| 25.50 | 29.40 | .83 | . 42 |
| inge | | | |
| 7.33 . | 8.41 | •79 | •44 |
| 6.60 | 6.30 | •31 | •76 |
| tings | | | |
| 3.58 | 7.00 | 3.09 | •01* |
| 2,60 | 4.10 | 1.72 | •12 |
| | Disfigured 19.00 25.50 ings 7.33 6.60 tings 3.58 2.60 | Disfigured Nondisfigured 19.00 26.41 25.50 29.40 ings 7.33 8.41 6.60 6.30 tings 3.58 7.00 2.60 4.10 | Disfigured Nondisfigured t-value 19.00 26.41 2.58 25.50 29.40 .83 sings 7.33 8.41 .79 6.60 6.30 .31 stings 3.58 7.00 3.09 2.60 4.10 1.72 |

* met significance level of at least .05 with two-tailed test.

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Motility

The second question asked whether there were differences between the disfigured and nondisfigured groups in the number of entries into all settings. The results of this question are presented in Table 6. The comparison for formal settings was statistically significant for male subjects - favoring the nondisfigured group - but not for females. The comparison for informal indoor settings did not meet the stated significance level for either male or female subjects. Similarly, statistical significance levels were not met for the comparison of informal outdoor settings. However, the comparison for males on informal outdoor settings approached (.06) the significance level.

Companions

The third question pertained to differences between the disfigured and nondisfigured groups in the number of entries into settings with various kinds of companions. These data are presented in Table 7 for male subjects. The categories for companions were: (a) alone, (b) younger age (i.e., up to 12 years of age), (c) peers (i.e., 13 - 19 years of age), (d) adults, (e) combinations (i.e., any combination of categories b, c, d). Comparisons were made separately for male and female subjects. For each companion category, three types of settings were analyzed: all formal settings, informal indoor settings, and informal outdoor settings.

MEAN SUM OF ENTRIES INTO SETTINGS IN STATED CATEGORIES (MOTILITY)

| Type of Setting and Sex of Subjects | of Setting Disfigured 1 and f Subjects | | t-value | P | |
|---|--|-------|---------|------|--|
| All Formal Settings | | | | | |
| Males | 48.50 | 67.75 | 2.92 | •01* | |
| Females | 63.10 | 67.70 | •38 | •71 | |
| Informal Indoor Sett | ings | | | | |
| Males | 20.16 | 17.08 | •65 | •53 | |
| Females | 16.30 | 12.30 | •91 | •38 | |
| Informal Outdoor Set | tings | | | | |
| Males | 8.66 | 12.33 | 2.09 | •06 | |
| Females | 5.30 | 7.40 | .85 | •41 | |

* met significance level of at least .05 with two-tailed test.

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TABLE 7

MEAN SUM OF ENTRIES INTO SPECIFIED SETTINGS WITH SPECIFIED COMFANIONS FOR MALE SUBJECTS

| Type of Specified Companion Setting | Disfigured | Nondisfigured | t-value | p |
|--|-------------|-------------------|---------|-------------|
| Alone | | | | |
| Formal Settings | 23.66 | 30.25 | 2.52 | .02* |
| Informal Indoor | 1.33 | •66 | •89 | -38 |
| Informal Outdoor | 1.75 | 2,58 | •91 | •38 |
| Younger Age | | | | |
| Formal Settings | - 08 | •08 | •00 | 1.00 |
| Informal Indoor | •00 | •00 | •00 | 1.00 |
| Informal Outdoor | •00 | • • • • • • • • • | •00 | 1.00 |
| Peers | | - | | |
| Formal Settings | 16.75 | 21.50 | 1.50 | .16 |
| Informal Indoor | 15.91 | 13.25 | •74 | •47 |
| Informal Outdoor | 6.33 | 8.66 | 1.98 | •07 |
| Adults | | | | |
| Formal Settings | 2.08 | 9•75 | 3.05 | •01* |
| Informal Indoor | . 83 | 1.33 | •42 | .67 |
| Informal Outdoor | •16 | •33 | •56 | •58 |
| Combinations | | | | |
| Formal Settings | 5.91 | 6.16 | •20 | •83 |
| Informal Indoor | 2.08 | 1.83 | •41 | . 58 |
| Informal Outdoor | •41 | •75 | •77 | •45 |

* met significance level of at least .05 with two-tailed test.

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The resulting 15 comparisons for male subjects yielded two significant differences. Disfigured males entered significantly fewer formal settings alone when compared to nondisfigured males. In addition, disfigured males entered significantly fewer formal settings with adults. The comparison for males on informal outdoor settings approached (.07) the significance level.

The data pertaining to female subjects are presented in Table 8. None of the comparisons met the established statistical significance levels.

Reentrance Rate

The fourth question dealt with the differences between the disfigured and nondisfigured groups in the number of entries per setting. These data are presented in Table 9. Again, three types of settings are distinguished: formal, informal indoor, and informal outdoor. In addition, each of these types of settings has been analyzed separately for male and female subjects. One of the resulting six comparisons reached the statistical significance level. Disfigured males showed a significantly greater mean number of entries per informal indoor setting than nondisfigured males.

Heterogeneity

The fifth question concerned the difference between disfigured and nondisfigured groups in the number of separate varieties formed by the settings entered. These data are pre-

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MEAN SUM OF ENTRIES INTO SPECIFIED SETTINGS WITH SPECIFIED COMPANIONS FOR FEMALE SUBJECTS

| Type of Specified Companion Setting | Disfigured | Nondisfigured | t-value | p |
|--|------------|-----------------|---------|-------------------|
| Alone | | | | |
| Formal Settings | 34.00 | 34.10 | .01 | •98 |
| Informal Indoor | 1.10 | •50 | 1.20 | .25 |
| Informal Outdoor | .40 | •80 | .76 | , ' +ó |
| Younger Age | | | | |
| Formal Settings | 1.00 | 1.40 | •47 | •64 |
| Informal Indoor | •00 | •00 | •00 | 1.00 |
| Informal Outdoor | •00 | •00 | •00 | 1.00 |
| Peers | | | | |
| Formal Settings | 15.40 | 19.10 | 1.23 | •24 |
| Informal Indoor | 10.30 | 9.20 | •48 | •63 |
| Informal Outdoor | 3.90 | 5.10 | •55 | •59 |
| Adults | | | - | |
| Formal Settings | 6.40 | 3.80 | •98 | •34 |
| Informal Indoor | 2.80 | 1.00 | 1.05 | •31 |
| Informal Outdoor | •40 | •30 | •36 | •72 |
| Combinations | | | | |
| Formal Settings | 6.30 | 9 . 30 · | 1.11 | .29 |
| Informal Indoor | 2.10 | 1.60 | •76 | •46 |
| Informal Outdoor | •60 | 1.20 | 1.26 | •23 |
| | | | | |

| TABLE 9 | 9 |
|---------|---|
|---------|---|

MEAN NUMBER OF ENTRIES PER SETTING (REENTRANCE RATE)

| Type of Setting and Sex of Subjects | Disfigured | Nondisfigured | t-value | р |
|---|------------|---------------|---------|------|
| Formal Settings | <u></u> | | | |
| Males | 3.60 | 2.89 | •91 | • 37 |
| Females | 2.69 | 2.32 | 1.09 | •29 |
| Informal Indoor S | Settings | | | |
| Males | 3.34 | · 2.07 | 2.27 | •04∓ |
| Females | 2.31 | 1.87 | •90 | •38 |
| Informal Outdoor | Settings | | | |
| Males | 3,23 | 1.69 | 1.04 | •31 |
| Females | 1.73 | 1.60 | •27 | •79 |

* met significance level of at least .05 with two-tailed test.

sented in Table 10. None of the comparisons reached the criterion of statistical significance.

Dispersion

The sixth question asked whether there were differences between the disfigured and nondisfigured groups in the number of different settings entered per variety. The settings were separated into formal settings, informal indoor, and informal outdoor settings. The resultant comparisons did not yield statistically significant differences. Table 11 gives an account of these data.

Occupancy

The seventh question pertained to the differences between disfigured and nondisfigured groups in the total absolute amount of time (minutes) spent in entered settings. These data are presented in Table 12. Formal settings were distinguished from informal ones. Informal settings were further categorized as informal indoor settings and informal outdoor settings. The comparisons for male subjects for formal settings approached (.06) statistical significance. However, female disfigured subjects clearly spent significantly less time in formal settings than their nondisfigured counterparts. The comparisons for informal indoor settings and informal outdoor settings for either male or female subjects did not meet statistical significance.

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MEAN NUMBER OF VARIETIES FORMED BY ENTERED SETTINGS (HETEROGENEITY)

| Type of Setting and Sex of Subjects | Setting Disfigured | | t-value | P | |
|---|--------------------|--------|---------|-----|--|
| Formal Settings | | | | | |
| Males | 12.91 | 16.75 | 1.65 | •12 | |
| Females | 17.20 | 16.70 | .21 | •83 | |
| Informal Indoor Set | tings | | | | |
| Males | 3.75 | . 3.00 | 1.07 | •30 | |
| Females | 2.10 | 2.00 | •16 | .87 | |
| Informal Outdoor Se | ttings | | | | |
| Males | 2,41 | 3.25 | 1.65 | •12 | |
| Females | 2.20 | 2.50 | •57 | •5? | |

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MEAN NUMBER OF ENTERED SETTINGS PER VARIETY (DISPERSION)

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| Type of Setting and Sex of Subjects | Disfigured | Nondisfigured | t-value | P |
|--|------------|---------------|---------|-------------|
| Formal Settings | | | | |
| Males | 4.24 | 4.49 | •42 | •68 |
| Females | 3.67 | 4.12 | .87 | •40 |
| Informal Indoor Se | ttings | | | |
| Males | 5,26 | . 6.34 | •70 | •49 |
| Fenales | 9.80 | 7•67· | •52 | . 61 |
| Informal Outdoor S | lettings | | | |
| Males | 3.00 | 3.48 | 1.04 | •31 |
| Females | 1.96 | 2.80 | •98 | •35 |

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MEAN SUM OF MINUTES SPENT IN SPECIFIED SETTINGS (OCCUPANCY)

| Type of Setting and Sex of Subjects | Disfigured | Nondisfigured | t-value | р |
|---|------------|---------------|---------|------|
| Formal Settings | | | | |
| Males | 10,759 | 12,879 | 2.03 | •06 |
| Females | 10,286 | 13,335 | 2.23 | •05* |
| Informal Indoor Se | ttings | | | |
| Males | 3,439 | 2,278 | 1.49 | •16 |
| Females | 2,565 | 2,219 | 1.19 | •26 |
| Informal Outdoor S | ettings | | | |
| Males | 1,056 | 1,171 | •43 | •66 |
| Females | 585 | 924 | •97 | •35 |

* met significance level of at least .05 with two-tailed test.

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Time Cumulation

The eighth question posed concerned possible differences between the disfigured and nondisfigured groups in the minutes amassed per entered setting. These data are presented in Table 13. The comparison for male subjects for formal settings reached statistical significance; disfigured males spent significantly more time per formal setting than nondisfigured rales. No statistical significance was reached when females are compared. The comparisons for informal indoor settings and informal outdoor settings for either male or female subjects did not reach the criterion of statistical significance.

Penetration

The ninth question asked whether there were differences between the disfigured and nondisfigured groups in the rate of participation in settings at various levels of penetration. The data for male subjects are presented in Table 14, and for female subjects in Table 15. Formal behavior settings were distinguished from informal ones which were separated into informal indoor, and informal outdoor. Six different penetration levels were applied to formal settings, and three different penetration levels were employed for informal behavior settings. For the analysis of penetration scores, the Wilcoxon matched-pairs signed-ranks test was used. Consequently, T-values stated in Tables 14 and 15 are Wilcoxon T-values.

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TAPLE 13

MEAN SUM OF MINUTES SPENT PER SETTING (TIME CUMULATION)

| Type of Setting and Sex of Subjects | Disfigured | Nondisfigured | T-v alue | p |
|---|------------|---------------|-----------------|---------------|
| Formal Settings | | | | |
| Males | 244 | 197 | 3.31 | , 006* |
| Females | 181 | 207 | 1.28 | •22 |
| Informal Indoor Set | tings | | | |
| Males | 176 | 133 | 1.43 | .17 |
| Females | 115 | 85 | 1.24 | •24 |
| Informal Outdoor Se | ttings | | | |
| Males | 120 | 95 | •97 | •35 |
| Females | 81 | 125 | - 79 | •44 |

* met significance level of at least .05 with two-tailed test.

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MEAN SUM OF ENTRIES INTO SETTINGS OF DIFFERENT PENETRATION LEVELS FOR MALE SUBJECTS

| Penetration Levels Di | sfigured | Nondisfigured | T-value | N | P |
|-----------------------|----------|---------------|----------------|----|-------|
| Formal | | | | 0 | |
| Bystander or Follower | 4.00 | 2.66 | 11.00 | ð | NS |
| Spectator or Guest | 7•33 | 8.75 | 28.00 | 12 | NS |
| Member or Customer | 31.58 | 42.33 | 7.00 | 12 | •01* |
| Special participant | 4.41 | 13.83 | 7.00 | 12 | •01* |
| Joint Leader | •25 | •41 | 0.00 | 12 | NS |
| Single Leader | •16 | •00 | 0.00 | 12 | NS |
| Informal Indoor | | | | | |
| Passive | 9.50 | 5.25 | 12.50 | 10 | NS |
| Active, Verbal | 7.83 | 10.75 | 26,50 | 12 | NS |
| Active, Physical | 11.08 | 13.00 | 19.00 | 11 | NS |
| Informal Outdoor | | | | | |
| Passivo | 7.36 | 6.52 | 9.00 | 7 | NS |
| Active, Verbal | 6.90 | 8.05 | 7. 50 | 5 | NS |
| Active, Physical | 7.87 | 20.42 | 5.50 | 11 | •025* |

* met significance level of at least .65 with two-tailed test.

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| MEAN | SUM | OF | ENTRIES | INTO | SETTINGS | OF | DIFFERENT | PENETRATION | LEVELS |
|---------------------|-----|----|---------|------|----------|----|-----------|-------------|--------|
| FOR FEMALE SUBJECTS | | | | | | | | | |

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| Penetration Levels | Disfigured | Nondisfigured | T-value | N | p |
|-----------------------|------------|---------------|----------------|----|------|
| Formal | | | | | |
| Bystander or Follower | r 9.30 | 1.30 | 0.00 | 10 | •01* |
| Spectator or Guest | 10.70 | 10.40 | 18.50 | 9 | NS |
| Member or Customer | 36.40 | 49.50 | 12.50 | 10 | NS |
| Special Participant | 5.20 | 4.00 | 15.00 | 8 | NS |
| Joint Leader | .30 | 1.60 | 8.00 | 7 | NS |
| Single Leader | •00 | •00 | 0.00 | 7 | NS |
| Informal Indoor | | • | | | |
| Passive | 8.90 | 4.10 | 9.00 | 10 | NS |
| Active, Verbal | 7.30 | 10.20 | 9.50 | 9 | ns |
| Active, Physical | 4.50 | 5.50 | 0.00 | 10 | NS |
| Informal Outdcor | | | | | |
| Passive | 6.81 | 5.70 | 21.50 | 10 | NS |
| Active, Verbal | 6.09 | 7.40 | 0.00 | 9 | NS |
| Active, Physical | 5.80 | 6.74 | 24.00 | 10 | NS |

* met significance level of at least .05 with two-tailed test.

The comparison for male subjects in Tatle 14 revealed that disfigured teenagers entered formal settings significantly fewer times as members or customers than the nondisfigured group. Likewise, the disfigured males were significantly fewer times special participants in formal settings. The remaining comparisons for bystanders or followers, spectators or guests, joint leaders, and single leaders did not reveal any significant differences in formal settings.

The comparisons for all three penetration levels for informal indoor settings did not reveal any significant differences for male subjects. However, the active physical penetration level for informal outdoor settings shows that disfigured male subjects entered this category significantly fewer times than nondisfigured males. The remaining two levels (passive, and active verbal) for informal outdoor settings did not indicate statistically significant differences.

The analysis for penetration levels for female subjects is presented in Table 15. The comparisons for the six penetration levels for formal settings revealed one significant difference. Disfigured female subjects entered formal settings significantly more frequently as bystanders or followers than nondisfigured female teenagers. The comparisons for informal indoor and informal outdoor settings on all three penetration levels did not result in statistically significant differences.

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Quantitative Structure of Behavioral Data

Of the 96 specific comparisons reported so far, 12 (12.5 %) yielded statistics with associated probabilities of .05 or lower. Of the 12 significant differences, 10 reflected differences in rates of participation in formal settings, while the remaining two reflected differences in Informal Outdoor Settings. This narrow domain of behavioral differences suggests that the data may include patterns of internal structure that are not reflected in the comparisons that are listed above. In order to explore such possible patterns, a correlational analysis was carried out on the data.

Independently for the experimental and control groups, 19 behavioral measures were subjected to intercorrelation, a principal-components factor analysis, and a Varimax rotation toward simplification of structure. Because of small sample size, these procedures can, at best, be exploratory, but they are revealing. Table 16 displays the intercorrelation of five simple behavioral measures from among the 19. Table 17 displays the loadings on the major factor for each of the two groups. (Factor I accounted for 29.6 % of the variance for experimental subjects and 26.2 % for control subjects).

Even though roughly, and with some noteworthy exceptions, a reasonable pattern emerges from the findings. First, one would expect Scope (number of different settings entered) to be positively correlated with Motility (number of entries into settings)

TAELE 16

INTERCORRELATIONS OF FIVE VARIABLES FOR THE TWO STUDY GROUPS

| | Scope | Motility | Reentrance | Feterogeneity | Tire Cumulation |
|------------------|---------------|-------------|------------|---------------|--------------------|
| Scope | | | | | |
| | - | | | | |
| | - | | | | |
| Motility | | | | | |
| | . 85 * | - | | | |
| | •78 | - | | | |
| Reentran | ce | | • | | |
| | 53 | 12 | - | | |
| | 62 | 04 | - | | |
| Heteroge | neity | | | | |
| | •83 | •74 | 49 | | |
| | •64 | . 60 | 29 | - | |
| Time Cumulati | on | | | | |
| | 69 | 70 | .38 | 67 | - |
| | 80 | 83 | •29 | 67 | - |

* The first entry in each case is for the experimental group; the second is for the control group.

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MAJOR VARIABLES CONSTITUTING FACTOR I AND THEIR LCADINGS FOR THE TWO STUDY GROUPS

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| E | xperimental | Control |
|--|--------------------|---------|
| Scope (all settings) | •66 | .85 |
| Motility (all settings) | •70 | •91 |
| Heterogeneity (formal settings) | •83 | |
| Time Cumulation (all settings) | 62 | 87 |
| Companions (alone, all settings) | •86 | •71 |
| Companions (peers, all settings) | • | •73 |
| Penetration (spectator or guest, | •79 | |
| Penetration (member or customer, | •94 | •62 |
| Penetration (special participant. | •87 | |
| Penetration (active verbal, informal) | • | •70 |

and Heterogeneity (number of varieties of settings entered) and to be negatively correlated with Reentrance (number of entries per setting) and Time Cumulation (amount of time per setting). Perusal of the first column in Table 16 indicates that such a pattern emerged. The other entries in Table 16 tend to follow in reasonable fashion. The factor loadings in Table 17 also support the pattern (except Heterogeneity for control group and the fact that Reentrance does not load at all). Furthermore, some of the comparisons reviewed above agree with this pattern. That is, control-group males scored higher than experimental-group males on Scope (Table 5), Motility (Table 6), and came close to scoring higher on Heterogeneity (Table 10) - a pattern of findings that indicates that Scope, Motility, and Heterogeneity intercorrelated positively. More importantly, a reversal occurred (experimental over control) for Reentrance (Table 9) and Time Cumulation (Table 13).

All three sets of findings - the comparisons in Tables 5, 6, 7, 9, 10, and 13; the correlations in Table 16; and factor loadings in Table 17 - converge somewhat in suggesting that the more widely the subjects ranged across the community environment, the less they reentered the same settings and the less time they spent in each setting. Thus, the findings support the conclusion that nondisfigured males ranged more widely within their community than disfigured males and that disfigured males participated more frequently and spent more time in a narrower range of settings. Beyond this central pattern, the remaining differences are scattered and difficult to interpret.

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CHAPTER IV

DISCUSSION AND SUMMARY

The purpose of the present investigation was to assess the community adjustment of facially disfigured burned teenagers. The data were compiled in terms of participation in behavior settings, a methodology of ecological psychology developed by Barker (1968) and Wright (1969). Data were analyzed separately for males and females and according to a number of descriptive variables pertaining to behavior of the subjects away from home. Twenty-two experimental disfigured subjects were compared with a matched control group. After an initial training period of three days, each subject served as his own data collector for a continuous four-week period. The subjects were encouraged to record their activities immediately after they were completed and were required to mail the record forms daily to the investigator.

The present study is a logical extension of Schmitt's (1971) pioneering work with primary school age children regarding the community participation of disfigured and nondisfigured teenagers. The nine major descriptive variables employed were: (a) number of entered settings (scope), (b) number of entries into all settings (motility), (c) number of entries into settings with specified companions,

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(d) number of entries per setting (reentrance rate), (e) number of varieties formed by the settings entered (heterogeneity), (f) number of different settings entered per variety (dispersion), (g) absolute amount of time spent in all settings (occupancy), (h) minutes amassed per entered setting (time cumulation), and (i) different levels of penetrations into various participation levels for entries into settings. For all variables, a distinction was made between formal and informal settings. Informal settings were further separated as behavior settings which occurred predominantly indoors and outdoors.

An overview of the results indicates that of the 96 separate comparisons made 12 reached the established level of statistical significance, i.e., 12.5 % of the total. These differences point to several overall conclusions:

The overwhelming majority of significant differences occurred among male subjects. On the surface, this finding runs counter to common sense. One might expect that attractive appearance and cosmetic issues would be more important to female than to male teenagers and that, therefore, females would show more significant differences. In light of these results, this commonsense assumption must be questioned. Facial disfigurement seems to have some adverse effects on the community adjustment of female teenagers, namely in the greater degree of passivity displayed, as indicated by their being significantly more often a bystander or follower, and also in the lesser amount of time

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spent (occupancy) ir formal settings. Nonetheless, the majority of significant differences occur with males. Quite possibly, this might be related to a tendency in our culture to expect a more aggressive, leading, and competitive role from a male, while a female is culturally expected to be more passive and following. Perhaps, there are sex differences in vanity that run counter to common sense. These different cultural expectations may lead to different coping mechanisms as a disfigured teenager faces the social world. It would seem more appropriate to conclude that disfigured males and females have different styles of community adjustment.

Of the 12 significant differences found 10 of them occur with males and generally seem to indicate that disfigured males venture less, range less widely, and spend less time in certain types of settings, and that disfigured males compensate by reentering the same settings more often and spending more time in them.

The data support the conclusion that facial disfigurement produces a core pattern of effects on teenagers, especially males, and that the two sexes handle their community adjustment in a different manner. Relative to his nondisfigured counterpart, the disfigured male seems to avoid wide-ranging participation in formal settings in favor of rather intensive participation in a more restricted domain of settings. Facial disfigurement seems to make little difference in the community participation of the female.

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Specifically, then, what are the types of settings that a disfigured male teenager tends to avoid? Disfigured males ventured into fewer numbers and kinds of formal and informal outdoor settings. Nondisfigured males ranged more widely within their community than nondisfigured males and disfigured males participated more frequently and spent more time in a narrower range of settings. The more widely the subjects ranged across the community environment, the less they reentered the same setting and the less time they spent in each setting.

Since the disfigured male enters fewer settings (scope), a trend of p < .12 towards lower scores for fewer varieties formed (heterogeneity) is not surprising. Because the disfigured male limits his ventures into formal settings per se it is to be expected that he has fewer opportunities to sample the wide range of varieties of settings. In other words, the quantity of different experiences in a great variety of settings is reduced.

The possibility that a certain reluctance towards impersonal and demanding situations on the part of the disfigured male is involved in his style of community adjustment is supported by his relative scores on involvement measures such as companions and penetration. The disfigured male enters formal settings significantly fewer times alone, or with adult companions. Clearly, to enter a formal setting alone is more impersonal than to enter with a peer. And, to enter a formal setting with an adult is more likely to involve an authority figure who demands behavior be-

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fitting certain standards. An apparent inclination by the disfigured male towards the peer companion who is likely to be less impersonal or demanding is noticable.

Another clear-cut indicator of degree of involvement lies in the peretration scores. Although it is not surprising that the disfigured male's smaller frequency of entered settings is supported by numerically smaller peretration scores, the distribution of penetration measures is noteworthy. The penetration scores of disfigured males for the lowest level of involvement (such as bystander or follower, and spectator) are <u>rot</u> different from the nondisfigured group. However, the scores for more active involvement, such as member or customer, and special participant show significantly lower rates for disfigured males. Evidently, when the disfigured_male enters fewer formal settings, he primarily avoids those which are likely to involve him in a more salient role and a higher activity level.

The same cannot be said about informal outdoor settings. Although the disfigured male enters significantly fewer informal outdoor settings (scope) and makes also fewer visits per informal outdoor setting (motility), he appears to spend as much total time (occupancy) and time per informal outdoor setting (time cumulation) as the nondisfigured male. The disfigured male enters fewer informal outdoor settings but spends as much time in them as the nondisfigured male. At least two reasonable explanations are possible. First, there may be a "reluctance scale", with the greatest reluctance noted for the formal settings (seven significant differences), intermediate reluctance for informal outdoor settings (three significant differences), and least reluctance for informal indoor settings (with only one significant difference). Concomitantly, the degree of reluctance might be positively related to the degree of impersonality and competitiveness of the situations. Second, it would seem plausible that formal settings, by their very nature, are scheduled, so that by avoiding them, occupancy scores are automatically reduced. Conceivably, both of the above two factors could be involved. For example, if it is argued that informal outdoor settings are more likely to involve competitive activities (i.e., a kind of "reluctance scale" might be covertly operating), then this ought to be reflected in penetration scores. This is exactly the case. Disfigured males show significantly lower scores for the category "active physical" for informal outdoor settings than their nondisfigured counterparts. Again. since fewer informal outdoor settings are entered, a certain inherent decrease of informal penetration scores can be expected. However, as in the case of formal penetration scores, the distribution or relative reduction in penetration scores is noteworthy. In almost characteristic fashion, it is the kind of situations which are more likely to be competitive, i.e., the active physical, that the disfigured male is significantly less often involved in than either active verbal or passive situations. One of the 10 significant differences for male subjects is the reentrance rate for informal indoor settings. Disfigured males have significantly more entries per informal indoor setting. This finding needs to be evaluated in the context of the trend (p < .16) by disfigured males to also spend more total time (occupancy) in informal indoor settings, and also to spend more (p < .17) time per setting (time cumulation). Furthermore, a nearly significant difference of .06 indicates less total amount of time spent in formal settings. This pattern suggests that the disfigured male tends to compensate for his avoidance of formal settings and, to a lesser extent, informal outdoor settings, with a greater in-depth experience of informal indoor settings which are away from home.

The community adjustment of disfigured females indicates a different pattern. The findings suggest that, unlike the male, the disfigured female tends to participate in formal settings of the community life much like her nondisfigured counterparts. However, there is a hint that the disfigured female may withdraw from involvement by merely being an onlooker rather than an active participant. The disfigured female appears to be significantly more often a mere bystander or onlooker than a nondisfigured female. In addition, there is the suggestion that disfigured females - although frequenting all types of settings as much as the nondisfigured females - tend to reduce the total amount of time (occupancy) spent in formal settings. In other words, the disfi-

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gured female may withdraw from participation but not presence.

To some extent, the findings of the present study are consistent with those of Schmitt's (1971) investigation with primary school age children. Schmitt arrived at two overall conclusions:

The first is that the behavioral topography and depth of involvement in life experience of primary school age children is neither necessarily nor overwhelmingly affected by the presence of acquired facial disfigurement (p. 86).

Second, by and large, the disfigured group is more prone to seek more limited experience in informal settings closer to home. The nondisfigured group is the more adventurous, roaming further from home, and exploring more facets of the community horizon (p.89).

Schmitt's first conclusion pertaining to primary school age children is not so readily applicable to teenagers. As discussed above, disfigured female and male teenagers appear to adopt different community adjustment styles. Schmitt's second conclusion is easily applicable to disfigured male teenagers but not to females. These similarities and differences in the findings of Schmitt's investigation and the present study suggest that either (a) a shift in community adjustment style occurs as the disfigured child moves from the primary school age to adolescence, or (b) that these differences are already present during primary school age, but were not detected because of small sample sizes in Schmitt's study.

The process of having the experimental subjects select the matched control group deserves special mention. In most cases, the control subject was a friend, neighbor, or classmate of the experimental subject. Thus, no actual random selection took place which may result in decreasing the likelihood of finding significant differences. On the other hand, this procedure makes intrinsic sense by reducing extraneous influences in the selection of control subjects.

Aside from a discussion of the findings, one final comment about the methodology employed seems in order. Unquestionably, to conduct a study with teenagers as their own data collectors, with the control subjects selected by the experimental subjects, and to carry on all the proceedings by mail and telephone represents a fairly novel approach and involves, therefore, certain risks. The fact that an investigation conducted in such a manner could be successful in providing needed empirical information might serve as indication that treating subjects as trustworthy and responsible individuals may evoke highly responsible and trustworthy behavior.

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APPENDIX A

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SUBJECTS

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| o [®] Male | - | Even Numbers |
|---------------------|---|----------------|
| Q Female | - | Uneven Numbers |
| Experimental | - | 01 to 49 |
| Control | - | 50 to 99 |

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VARIETIES

- 1 <u>Cultural</u> 1
- 01 Concerts
- 02 Theaters
- 03 Libraries
- 04 Museums
- 05 Public Speech
- 06 Art Show

VARIETIES

2 - Educational - 2

01 - Formal Schooling

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- 02 Music Lessons
- 03 Oceanography and the like educational meetings
- 04 Driving Lesson

VARIETIES OF ACTIVITIES ORGANIZED BY KIND

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3 - Recreational - 3

| | J - <u>Recreational</u> - J |
|----|--|
| | · 6 |
| 01 | Bowling Alleys |
| 02 | Dances . |
| 03 | Dinners and Banquets |
| 04 | Indoor Athletic Contests |
| 05 | Motion Picture Theaters |
| 06 | Open Spaces |
| 07 | Outdoor Athletic Contests |
| 08 | Parties |
| 09 | Picnics |
| 10 | Riding Stables . |
| 11 | Roller Skating Rinks |
| 12 | Schoolground and Parks Supervised Play |
| 13 | Ballgames, Rodeo |
| 14 | Sponsored Social Occasions |
| 15 | Trampolines |
| 16 | Parades |
| 17 | Resorts |
| 18 | Golf Courses |
| 19 | |
| 20 | Sightseeing Trips |
| 21 | Motion Picture - Drive-In |
| 22 | Private Club |
| | |

23 Amusement Parks

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VARIETIES

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4 - Religious - 4

Cl - Funerals

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- 02 Fellowships
- 03 Regular Worship Service -
- 04 Special Worship Service
- 05 Sunday School Class
- 06 Church Choir Practice
- 07 -

VARIETIES OF ACTIVITIES ORGANIZED BY KIND

5 - Service - 5

- 01 Attorneys*
- 03 Barber and Beauty Shops
- 04 Broadcasting Stations
- 05 Bus Depots
- 06 Child Care Services (Babysitting)
- 07 Church Offices
- 08 City Refuse Crews
- 09 Dental Offices and Clinics
- 10 Doctors Offices
- 11 Election Quarters
- 12 Fire Stations
- 13 Funeral Homes
- 14 Government Offices
- 15 Hcspitals
- 16 Movie Production Plants
- 17
- 18 Nursing and Rest Homes
- 19 Police Stations
- 20 Postoffices
- 21 Railroad Stations
- 22 Real Estate Offices
- 23 School Offices
- 24 Telegraph Offices
- 25 Trailer and Parking Lots
- 26 Travel Agencies

| Page 2 | |
|---------|----|
| Service | .۴ |
| Cont'd | |

| 27 | Veterina | rian | Servi | ices |
|----|----------|------|-------|------|
|----|----------|------|-------|------|

28

29 Airports

- 30 Hotels and Motels
- 31 Yard Work
- 32 Banks and Finance Offices
- 33 Cleaners, Laundry, Washateria
- 34 Car Wash and Service
- 35 Pool Halls
- 36 Cleaning House
- 37 Rental Agencies
- 38 Newspaper Advertisement

VARIETIES OF ACTIVITIES ORGANIZED BY KIND

6 - Trade - 6

01 Automobile Parts Stores

- 02 Automobile Sales Shops
- 03 Awnings Sales
- 04 Bakeries
- 05 Shoe Store
- 06 Bicycle Shops
- 07 Book Stores
- 08 Building Supply Companies
- 09 Camera Shops, Photo Studio
- 10 Candy and Ice Cream Stores, Soda Fountains
- 11 Clothing Stores
- 12 Dairies
- 13 Department Stores, Dime Stores
- 14 Door-to-Door Sales, Newspaper Route
- 15 Drug Stores
- 16 Dry Goods Store (Convenient Stores)
- 17 Electrical Shops
- 18 Farm Equipment Stores
- **19** Feed Stores
- 21 Florists and Greenhouses
- 22 Food Stores Markets
- 23 Furniture Stores
- 24 Gasoline Stations
- 25 Gift Shops
- 26 Hardware Stores

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| Page 2 Trade Cont'd | ° L (|
|---------------------------|--|
| | |
| 27 | Hobby Shops |
| 28 | Household Appliance Stores |
| 29 | Boat Stores |
| 30 | Industrial Plants, Factories |
| 31 | Jewelry Shops |
| 33 | Liquor Stores |
| 34 | Music Stores |
| 35 | Paint Stores |
| 36 | Pet Shops |
| 37 | Office Supplies Stores |
| 38 | Sporting Goods Stores |
| 39 | Construction Company - i.e., Building Houses |
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40 Food Stands, Restaurants

VARIETIES





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Assume activity is indoors, if it can be done indoors, unless specified by subject it was done outdoors.

VARIETIES

8 - Indeterminate - 8

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- 01 Construction Sites
- 02 Empty Buildings
- 03 Fires

04

SETTINGS

Settings need to be coded from raw data. No prearranged lists are possible since, for example, A & P Grocery Store on 23rd Street in Denver, Colorado is unique. All settings will be unique. Therefore, codes for settings are assigned as the raw data comes in from 01 as far as necessary. If, however, the identical setting is entered by a subject the identical code must be used again. In order to keep a record of what code numbers have been used, a list of assigned code numbers for each subject will be kept.

Two digit numbers must be assigned, e.g.: "01" not just: "1".

TIME

Code in minutes

- e.g. 5 minutes is coded as: 005
- e.g. 12 minutes is coded as: 012
- e.g. 1 1/2 hours is coded as: 090
- e.g. 5 hours is coded as: 300

TABLE

SCALE FOR RATING PENETRATIONS INTO FORMAL SETTINGS

- 1 Bystander Child takes no part and has no definite place or Follower in the setting. Example: Just "standing around" in a store.
- 2 Spectator Child takes no part but has a definite place. or Guest Examples: Attending a movie. Visiting an adult meeting as a guest.
- 3 Member Child takes ordinary part as a member or cusor Customer tomer. Examples: Attending a group meeting as a member. Buying something in a store.
- 4 Special Child takes a special part in the setting. Participant Example: Filling a role in a play.
- 5 Joint Child takes the lead along with someone else. Leader Example: Acting as president at a club meeting with an adult also in charge.
- 6 Single Child takes the lead alone. Examples: Direct-Leader ing a rhythm band. Heading a Scout patrol on a hike.

SCALE FOR RATING PENETRATIONS INTO INFORMAL SETTINGS

- 7 Passive Watch TV, watch others play.
- 8 Active, Plays ball, bicycling. Physical
- 9 Active, Discussions Verbal

(In case of doubt about penetration assign higher score, i.e. more involved, active).

COMPANIONS



| April | /18 | - | 01 |
|----------|-------------|----------|------|
| - | {19 | - | 02 |
| * | \ 20 | - | 03 |
| | 21 | - | 04 |
| | 22 | - | 05 |
| | 23 | | 06 |
| | 24 | - | 07 |
| | 25 | - | 08 |
| | 26 | - | 09 |
| | 27 | - | 10 |
| | 28 | - | 11 |
| | 29 | - | 12 |
| | 30 | - | 13 |
| | | | |
| May | 1 | - | 14 |
| | 2 | - | 15 |
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| | 4 | | 17 |
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| | 15 | <u>.</u> | 28 |
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DAY

APPENDIX B

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ACTIVITIES AND COMPANIONS SURVEY

Shriners Burns Institute Galveston Unit

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Guide For

Name:_____

ACTIVITIES AND COMPANIONS SURVEY

GUIDE

Procedure

The purpose of this survey is to get information about the activities and companions of a group of teenagers who have been treated at the Shriners Burns Institute; Galveston, Texas. Each of these teenagers will be matched with another teenager from his community. All teenagers in this survey are between 13 and 19 years of age.

As closely following an activity as possible, you (the teenager taking part in this survey) will record your activity and companions on the provided form. All activities away from your home for a complete 4-week period, including Saturdays and Sundays, should be recorded. It is estimated that, on the average, the daily recording will take altogether about 10-15 minutes.

Definition of Terms

Activity means the main thing you do in a particular place at a particular time. A "place" is referred to as a setting. 'A setting will mean just what it means in everyday life, as when we refer to a drugstore, a movie theater, a vacant lot, or birthday party as a setting for this or that sort of activity. The activities away from your home for each day are to be listed in order from first to last. Any activity that takes place repeatedly is listed as many times as it occurs.

Keep in mind that we want your ACTIVITIES in your community. We do not need to know what you do on the way to any place unless you stop somewhere and do something besides just "being on the way". How you get places is not important for our purposes, just what you do when you stop somewhere. And no matter how interesting the activities are at your home, you should not list them. An exception is when you are at a special meeting in your home, such as for example, a birthday party. List each store entered separately on a shopping trip. Also, list each neighbor's yard separately, if possible, when you do something in the neighborhood. This detailed information will tell us about how you get around.

A COMPANION is somebody who moves with you as you do things. Here are some examples: The salesclerk in a store you talk with is not a companion but the friend who went with you is. The neighborhood kids you observe playing ball are not companions but if you play with them they are. Somebody you know and meet in a drugstore is not a companion but if you sit down with her to have a coke together then she is. Sometimes you will do things alone, and we want to know this also. Pets are counted as companions if you do things together, but always make this clear in your record.

What to Record

It will be helpful now for you to take a look at the examples given from the form on the last page of this guide which will

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be used in recording the activities and companions for each day. Always write in your name, the date of recording, and the day-of-week (Monday, Tuesday, etc.) when the recording takes place. Next, notice the categories below this at the top of the Under the category of "WHAT" we page. want you to record each activity or main thing done in such a way as to indicate what part you played in the setting. Usually a brief phrase or two will state the main things done in such a way as to point out what part you played in the There are several examples on setting. the example record sheet.

Under the category "WHERE", we want to know exactly what the place was. For example, the record says Harper's Bookstore, Main Street, not just bookstore. One reason for this is that the survey is concerned with the different settings of a given kind teenagers enter in their communities. Please identify each home setting by the first as well as the last name of the homekeeper if you know the first name. If you go to another city for some activity, always record that city by name.

Next, notice that "HOW LONG" you
remained in the setting for each activ ity is recorded. Here, of course, the
best you can do is to make good estimates.
Your estimate should include the abbrevi ation min. for minutes and hr. for hours.

Notice the last category which asks "WITH WHOM" the activity was done. Identify your companions by first name, initial of last name, and by whichever of

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the following words is appropriate: friend, adult, brother, etc. Adult is anybody 20 and over. Also, try to state how many friends or adults are involved when there is more than one. Here again, sometimes the best you will be able to do is to make good estimates. If the companion was a member of your family, please identify that person such as father, brother, sister, or whoever.

You will see two other things at the bottom of the record sheet. One of these is:

Completeness Rating: 1 2 3 This amounts to a scale of three points. It is applied to the record as a whole for each day. Encircle 1 if you think that the record covers fully the activities and companions during the day, 2 if you think the record is moderately complete, and 3 if you think that the record is quite incomplete. Only best guesses can be made here, but they will help us to evaluate the thoroughness of the recordings you made.

How to Record

You are provided with this small guide and a supply of record forms. Carry these with you at all times and record in them as closely following an activity as possible. Because correctness and completeness are more important for this survey than when you record your activities you will decide when you can make your recording without being disturbed or distracted. Of course, on the whole it will be easier for e

you to record while things are still fresh in your mind. It is best to check the completeness of your recording before you go to bed at night.

Returning the Record Sheets

Your supplies include a record form for each day to be covered. They include also a pack of addressed and stamped envelopes, one for each day of the survey. On the following mornining each day, please mail the form filled out during the preceding day. It will help us to keep track of the records if you write your name and address on the envelope. Some days you may do nothing away from home; write "No activities away from home" on the record form and mail it to us the next morning just like all the other forms. Remember, everyday you will have to mail a form.

Finally, if you have any questions about anything at any time, no matter how unimportant you may think them to be, please do call me collect at either of the following phone numbers:

Office (Person to Person):

Home (Station to Station):

:



Your cooperation is greatly appreciated. I can assure you that your cooperation will give needed and valuable information about the behavior of teenagers.

> Reinhard W. Ronnebeck (Psychology Resident)

| 4 | ACTIVITIES AND COMPANIONS SURVEY | 1 ame |
|---|----------------------------------|-------------------|
| - | Striners Burns Institute | Date of Recording |
| • | Child Behavioral Studies Project | Day of Week |

| WHAT (Activity) | WHERE | HOW LONG | WITH WHOM Companions |
|--------------------|-------|----------|-------------------------|
| | | | |
| | | | |
| <u> </u> | | | |
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| | | - | • |

Tompleteness Rating: 1 2 3

1:

CONSENT

Authorization for psychological data to be obtained for the project known as the "Activities and Companions Survey" sponsored by the Shriners Burns Institute, Galveston Unit.

The officials and management of Shriners Hospitals for Crippled Children are hereby authorized to permit psychological data, which will be collected by and obtained from my child, _____, a minor, to be used for purposes of proposed scientific publication. I further represent that I am legally responsible for the above named child.

I understand that the anonymity of my child and family will be protected fully and that neither my child or other family members will in any way be jeopardized by the proposed publication.

Dated this day of _____, 1972.

Signature of Mother

Witnessed by:

Signature of Father

-{Confidential)

FAMILY INFORMATION

Activities and Companions Survey, 1972

| YOUR OWN FAMILY: | THE OTHER FAMILY: | |
|---|---|--|
| Name of Teenager taking part in the survey: | Name of Teenager taking part in the survey: | |
| Age: How far gone through School: | Age: How far gone through School: | |
| In School Now? | In School Now? | |
| List all others living at home: Name: Age: Relation: | List all others living at home: Name: Age: Relation: | |
| | | |
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| | | |
| Street Address: | Street Address: | |
| City + State: | City + State: | |
| Phone: | Phone : | |
| Length of Residence in City: | Length of Residence in City: | |
| Length of Residence at present address: Occupation of Father: | Length of Residence at present address: Occupation of Father: | |
| Education: | Education: | |
| Occupation of Mother: | Occupation of Mother: | |
| Education: | Education: | |
| Date of Burn Accident: How Burn Accident Occurred: | | |