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ALTRUISM, AMBIANCE, AND ACTION: A STUDY OF RURAL
AND URBAN EFFECTS ON HELPING BEHAVIOR

A DISSERTATION SUBMITTED TO THE GRADUATE DIVISION OF THE
UNIVERSITY OF HAWAII IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY
IN PSYCHOLOGY
MAY 1975

By
Ferne H. Weiner

Dissertation Committee:
Ronald C. Johnson, Chairman
Tom J. Ciborowski
Robert E. Cole
Michael J. Shapiro
Herbert B. Weaver
Acknowledgements

Sincere thanks to James MacFarland, and the many other faculty and staff members at Kauai Community College, for their cooperation and for providing facilities during the experimental sessions.

Accolades to Margaret Foster for her dependability and convincing performance as the "victim" in the staged emergency episode which was a critical part of the design.
Abstract

The purpose of this study was to investigate rural-urban differences in helping behavior. Although greater social responsiveness by rural residents has been implied in the literature, it has not been empirically established. In the search for antecedent factors influencing prosocial involvement as well as situational conditions acting to induce or inhibit altruism, independent variables representing the domains of demographic attributes and social roles, situational determinants, and individual difference dispositions were quantified and examined in a two-part laboratory study. Multiple dependent measures were used to assess the magnitude and frequency of helping response provided by the subject in a contrived emergency situation in which a confederate fell and ostensibly injured her ankle.

The college student subjects were divided by Sex, and on the basis of the community in which the subject grew up, distributed into Residence groups classed as Mainland Urban, Honolulu Urban, and Rural. Then, they were randomly assigned to one of two situational conditions which simulated either the frenetic ambiance of the urban surround (High Overload) or the leisurely atmosphere of the rural environment (Low Overload).
An examination of the results showed that, as expected, sex differences were not obtained in this situation, which did not involve sex-linked behaviors or high costs for the potential helper. Conforming to predictions, overload served to inhibit the number of helpers and the magnitude of helping across residence groups, while nonoverloaded subjects helped significantly more than those overloaded. However, in contrast to the Urban groups who did not differ from each other, the Rural group provided significantly less frequency and magnitude of helping overall. This unexpected finding was attributable to less helping by Rural group subjects in the nonoverloaded condition.

It was revealed by regression analysis that the dispositional variable of cognitive complexity, as tested by the Barron Complexity Scale, emerged with both dependent measures as the most significant predictor of helping among the five independent variables. The positive relationship between the individual's cognitive complexity and the likelihood of engaging in altruistic action was confirmed by further quantitative and qualitative analyses, and the influence of less complexity on helping behavior was illustrated. The subjects who scored substantially below the mean on the Barron Complexity Scale measure helped significantly less than those who scored either equal to or above the mean, and each of the Urban groups scored as more complex than the Rural group.
It was concluded that both the Residence and Overload variables affect helping behavior. However, the demographic residence factor is significantly related to prosocial action through the dispositional trait of cognitive complexity. The findings were ascribed to learned differences as a result of the stimuli afforded by background experiences.
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CHAPTER I
INTRODUCTION

Altruism refers to an ethical and benevolent act which is other-oriented in motive as opposed to an act that is self-oriented. The word altruisme was coined by Comte in the 1850's, and introduced into the social sciences in the reform tradition of the times. Derived from the Latin alter, the Italian based altru simply means "other." Definitional problems have not as yet been solved, and follow the researcher's theoretical orientation. Expressions range in scope, from broad conceptualizations which include any beneficial behavior to another in need without regard for the helper's motives (Darley & Latané, 1970), to narrow criteria such as specifications of vicarious empathic affect by the potential helper (Aronfreed, 1968, 1970). Between these two extremes, an appropriately general definition characterizes altruism as "behavior carried out to benefit another without anticipation of rewards from external sources" (Macaulay & Berkowitz, 1970, p. 3).

Historically, the concept dates to extant ancient sources in literature and philosophy of western and eastern thought. The moral ethic is espoused as a religious ideal in both Testaments of the Bible. The first emphasis on inner righteousness of motive which imposes an obligation to another is
enmeshed in the dictates of ritual (Holiness Code: Leviticus 19:18), and again the precept commanding love of neighbor is admonished in the teachings of Jesus (Mark 12:28; Matthew 22:34). The Preacher suggests that a three-fold cord of succor, warmth, and mutual defense bonds societies of men together (Ecclesiastes 4:9-12) while the parable of the Good Samaritan provides a classical story of spontaneous helping (Luke 10:30-37). The western philosophers viewed altruistic motives as a spiritual ideal, and were represented in antiquity by Plato and Aristotle. As proponents of the self-realization theory which emphasized the social nexus, man was defined "as an animal that achieves his fulfillment only through active participation in an organized society and through friendship with other people" (Katz, 1972, p. 63).

In the ancient sources of eastern thought the theme of helping one's fellow is also central, as exemplified by Mayahana Buddhism, the teachings of Confucius, and in the counsel of the Chinese philosopher Mencius (Fingarette, 1966). Although the methodology of current researchers differs, and the focus is more specific, both ancient philosophers and contemporary behavioral scientists seek to understand man's social nature through the study of this moral behavior.

Budd (1956) traced the career of altruism as a social force upon its arrival in the United States in 1882. The concept threatened to become a fad in the 1890's, due to the
uncertainties, political ferment, and spiritual fervor of the times. However, shortly after the turn of the century interest waned and the concept soon dissipated. Altruism was judged as too malleable, inexact, and inconclusive for practical affairs, and was absorbed into social Christianity.

Midlarsky (1968a) outlined the first revival of the concept as it pervaded the literature from two contrasting viewpoints. The phenomenon was seen either as a panacea for the ills of mankind (Deschesne, 1950; Montague, 1950; Sorokin, 1950, 1954) or as a cloak for man's assumed neurotic or Machiavellian motives (Queen, 1930; Schulweis, 1964). The first approach was utopian and replete with ethical biases. As an extension of the applied Christianity ideal expounded by 19th century American sociologists, it represented a faith which offered salvation. The second view embraced ethical skepticism and the belief that man's basic motives are self-centered. It evolved from the three main sources of Freud's Psychoanalysis, Watson's Behaviorism, and certain frequent interpretations of Darwin's principles.

From another, contemporary perspective, Hardin (1974) examined humanitarian endeavors from the view of human ecology, and emphasized this consideration for individuals and institutions. Although humanitarian efforts are usually well-meaning directives toward improving the human condition, helping others takes on a global significance in today's
world, which is characterized by over-population and a shortage of food supply. According to Hardin as well as to Paddock and Paddock (1967), helping the needy should of necessity be selective. In terms of its operational consequences, an uncontrolled system (e.g. foreign aid, open immigration policy) will result in the depletion of our nation's resources, as well as those of other undeveloped countries, without benefiting the recipients except in the short term.

Prior to the 1960's, most behavioral scientists were preoccupied with the problems of antisocial behavior, in response to the violence of our times reported daily through the mass media. However, some research directed to altruism and related aspects of social behavior is found among the social science disciplines. The studies reflect the predominance of children as subjects. In the child literature, the capacity for sympathy in young children was observed by Murphy (1937, 1942), and conflict behavior in nursery-school children was empirically assessed (Jersild & Markey, 1935; Roff & Roff, 1940). Wright (1942) behaviorally examined generosity by eight-year-olds towards friend and stranger. Turner (1948) measured altruistic attitudes as a hypothetical common trait among varying aged boys. Moral judgement was the concern of Piaget (1932 / 1948) and Lerner (1937), while moral behavior in the willingness to help others was studied by Hartshorne and May (1929). Havighurst and Taba (1949)
demonstrated individual difference characteristics in altruistic behavior. In studies with adult subjects, investigations pertained to cooperation and competition behavior (Deutsch, 1949), characteristics of aiding in times of disaster (Logan, Killian, & Mars, 1952; Form & Nosow, 1958) and personality traits as correlates of altruism (Cattell & Horowitz, 1952). Theoretically, Holmes (1945) considered the intraspecies reproductive beginnings of altruism. In comparative research, Hebb and Thompson (1954) traced infrahuman social behavior through the phylogenic scale, and Nissen and Crawford (1936) investigated the food-sharing behavior of young chimpanzees.

As a significant aspect of social thought, altruism is a relatively recent issue in the field of social psychology. The present resurgence of interest in the classical concept was influenced by the social forces activated in the movements of the 1960's, such as student activism, efforts for peace, and humanistic psychology. Specific impetus for the shift in emphasis from concern with negative to positive behaviors is attributable to the murder of Kitty Genovese (1964), the most prominent emergency episode among a series that occurred over the past ten years. This event is central to the present study and will be detailed in the next chapter. As a result of the episode, for the first time behavioral scientists are devoting systematic
consideration to the problem of the failure to help. An abundant amount of literature has been generated during the past decade of intensive investigation. The empirical studies have extensively employed both child and adult human subjects and are characterized by a variety of ingeniously contrived situations and contexts. An overview of the general research conducted with adult subjects will follow a brief taxonomy of these positive behaviors.

Positive Forms of Social Behavior

There are a diversity of dependent behaviors subsumed by the rubric positive forms of social behavior. Wispe (1972) delineated the many forms covered by this behavioral domain. Among the various manifestations of positive social behavior, altruism is the prototypic form while the others are special forms (e.g. volunteering, sharing, donating, helping). Each of these special forms involves different kinds of behaviors, situations, and research strategies. Helping, intervention, and charity behaviors are the most widely researched forms within the behavior category. Charity primarily requires material giving, and can be contrasted to intervention, which in addition to time, effort, and personal involvement, often entails risk of physical harm. For helping behavior, usually no personal danger is involved. Assistance or aid is provided toward a definite object or end, and the action connotes some amount of time
and effort expended. Prosocial behavior is the shortened and interchangeable term for the longer phrase. As a convenient index, the numerous forms of prosocial behaviors are generally referred to by the simple terminology provided by Macaulay and Berkowitz (1970), as altruism and helping behavior.

Although the concept is predicated on a moral standard which therefore posits that the intentions behind the act are crucial (Piaget, 1932/1948; Kohlberg, 1964), since positive social behaviors are antithetical in nature to negative or antisocial acts, they also imply positive social consequences (Wispé, 1972). The general research issues reveal the complexities and intricacies involved in this social problem.

Theoretical Issues

Altruism and helping behavior is a social problem because the inhibition of prosocial actions from innocent bystanders to another in need has occurred over a variety of situations. This noted lack of socially responsible behavior has given rise to two broad areas of inquiry, namely the determinants of helping and the attributions for helping. Two questions are being probed. What factors induce a person to help? What motivates that person to help?

Motivation

The nature of our cultural structure pertains to the question of motivation. Altruism is a matter of social
conscience rather than a formal prescription under Anglo-American common law. Fingarette (1966) suggested that the problem is the result of the absence of custom and explicit social policy. Gusfield (1966) set forth some social causes for acts of nonfeasance, or instances in which people have failed to act when he pointed out that there is no social loss involved in not helping or social role provided to motivate helping. Kaplan (1972) discussed the lack of prosocial focus and indicated that instead, the societal emphasis forbids one doing harm to another. In addition, legal liability is a rare but possible outcome of Good Samaritanism and the slightest hint of adverse legal action in a situation is likely to deter prosocial acts. Nevertheless, Kaplan questions the basic proposition recommended by Rudzinski (1966) for enforcing the duty to rescue. Would attempts to compel prosocial behavior through the pressures of law be compatible to altruistic motives?

Leeds (1963) indicated that voluntary and spontaneous opportunities for altruism occur in the absence of institutionalized means by the existence of "role vacuums" and "social vacuums" (p. 232). An example of a social vacuum is a situation, such as an automobile accident, in which help is needed and no formal institutions are organized to supply it. An instance of a role vacuum is a situation in which a teacher may provide aid beyond the framework of her role by visiting her sick pupil at home.
In the absence of institutionalized means, what induces a person to help? Moral norms have been postulated as an intrinsic motivating force for altruistic acts. Norms are guides to behavior as particularized by the culture. Social norms are prescriptions (e.g. "Love thy neighbor") and proscriptions (e.g. "Thou shalt not kill;" Brown, 1965, p. 49). Normative explanations propose that standards of socially responsible behavior are learned and internalized by the individual in the socialization process. These standards are based on cultural expectations as defined and transmitted by the socializing agents. The prosocial moral norms are activated through the anticipation of either positive or negative sanctions in one's response to a particular situation. Negative sanctions are aroused by violation of a norm, represented by censure in a public situation, and by guilt and self-blame evoked by one's internalized standards of conduct in general.

Normative explanations as attribution for prosocial behavior have been subject to strong criticisms (e.g. Latané & Darley, 1970; Krebs, 1970), and recently even by a foremost advocate (Berkowitz, 1972). Norms have been assessed as vague, general, contradictory, tautological, ad hoc attributions which are intrinsically unsuitable to explain behavior. However, the existence of an other-directed motivational force underlying altruistic acts has been assumed through the
years as apparent from Wright's (1946) article directed to the problem. In correspondence to the researcher's theoretical orientation, the basis of this force is either innate (e.g. Campbell, 1965; Hoffman, 1972, 1974) or a learned motive (e.g. Aronfreed, 1968; Rosenhan, 1972). Midlarsky (1968a) stated support for the existence of altruism on the experimental evidence obtained by testing hypothesized relationships. Krebs (1970) skeptically questioned its existence as he affirmed that self-sacrificial motivation has only been implied but not established. Hebb (1971) claimed that the studies of large-brained infrahuman animals have shown that altruism can occur, and that the complexity of human experience prevents conclusive evidence grounded in human data. In a rejoinder to Hebb, Krebs (1971) gave credence to the effect of empathic reactions in human subjects as providing an other-directed motivational base. Most researchers have followed the lead of Latané and Darley (1970), who stated that the question of motivation is a general one, and of a semiphilosophic nature. Therefore, it is doubtful whether an answer can ever be entirely obtained by reference to data. These investigators declared that the question regarding the determinants that induce helping is more specific, and as such is more amenable to research methods.
Determinants of Helping

The primary direction for inquiry has been toward discovering the determinants which act to facilitate or inhibit helping. Researchers continue to explore the variables and conditions that elicit altruism, and to identify the mechanisms for development of prosocial behavior such as modeling influences and positive affect. A number of conceptual themes have evolved from the intensive and diverse investigations. These either represent theoretical formulations which in turn have been tested empirically, or are the products of empirical assessment which thereupon have become systematized attributions. The prevailing concepts reflected in the literature are as follows: social influence processes (e.g. Latané & Darley, 1968, 1970); cost-benefit considerations (e.g. Clark & Word, 1974; Piliavin, Rodin, & Piliavin, 1969); equity (e.g. Walster, Berscheid, & Walster, 1970, 1973); transgression and guilt (e.g. Freedman, 1970; Rawlings, 1968); belief in a just world (e.g. Lerner, 1970; Lerner & Simmons, 1966); empathy (e.g. Hoffman, 1970, 1972, 1974; Rosenhan, 1969, 1972); reactance (e.g. Brehm, 1966; Brehm & Cole, 1966); and self-reinforcement (e.g. Weiss, Boyer, Lombardo, & Stich, 1973; Weiss, Buchanan, Alstatt, & Lombardo, 1971).

Darley and Latané (1968, 1970) and Latané and Darley (1968, 1969, 1970) have made substantial contributions to
understanding the social inhibition of bystanders by their perspicacious observations and extensive experimentation. These researchers formulated a theoretical model of the decision-making process that a bystander goes through when he is near the scene of an emergency. As a cognitive series of decisions, only one particular set of choices will lead to the observer's taking action in the situation. The person must first notice the event. After awareness, the event must be interpreted as an emergency. Then, the bystander must decide that it is his personal responsibility to act. Next, the form of assistance must be considered, as either direct or indirect. Finally, the decision of how to implement the decided action leads to helping behavior. However, cycling or blocking is a process that may occur during the decision-making. Characterized by confusion and conflict, the observer remains transfixed at the decision point and the victim is not helped. Additionally, the longer an individual waits in indecision, the more likely it is that he will unintentionally commit himself to inaction. In a similar vein, Schwartz (1970b) proposed three conditions for helping action to occur: high dependency of the victim; low costs for the potential helper; and the necessity for the latter to assume personal responsibility.
Empirical Issues

The bulk of the research is characterized by empirical investigations. The methods represent each of the paradigms: observational-naturalistic, correlational, and experimental. The research area is broad and exploratory in nature. The topical organization has been arbitrary, there have been numerous variations in operational referents, and methodological incomparability has been widespread. The inconsistencies have contributed to the conflicting reports and a lack of clearcut findings. In addition, the undertaking of separate approaches to the research issues has added to the failure to provide more conclusive evidence that just general trends.

There are three separate orientations from which to search for variables and conditions that influence altruism and helping. The first approach is centered on situational factors, while the second is focused on individual differences in personality characteristics, and the third is directed to individual differences in social roles and demographic attributes. Major shortcomings in the research can be ascribed to the attention paid to isolated variables at the exclusion of an interactive approach to the issue, and to measurement of the first two domains (i.e. situational determinants or dispositional traits) with relative neglect of the third domain (i.e. demographic variables and social roles).
Situational Variables

Those investigators concerned with situational determinants have manipulated factors and examined the effects in attempts to isolate variables that work to inhibit or facilitate helping responses. The preponderance of altruism research has been directed to inducing positive and negative affective or cognitive states in benefactors as mediators of altruistic responses. Situational lability has been recognized by consistent reports of the influence of seemingly minor variations in conditions on rates of helping. Examples of the variables which researchers often have subjected to manipulation in contrived emergency and nonemergency situations are as follows: group size and composition (e.g. Latané & Darley, 1968, 1970); salience of cue properties (e.g. Clark & Word, 1972, 1974); modeling effects (e.g. Bryan & Test, 1967; Wagner & Wheeler, 1969); competence (e.g. Kazdin & Bryan, 1971; Midlarsky, 1968b, 1971); dependency relationships (e.g. Berkowitz, 1969; Berkowitz & Daniels, 1963, 1964); responsibility (e.g. Geer & Jarmecky, 1973; Tilker, 1970); social comparison processes (e.g. Latané & Darley, 1970; Smith, Smythe, & Lien, 1972); and victim's need (e.g. Bickman & Kamzan, 1973; Wagner & Wheeler, 1969).

Dispositional Variables

The researchers who directed efforts to the second approach in the search for relevant variables attended to
dispositional characteristics of benefactors. More than 40 trait variables have been tested in the attempt to tap individual differences personality correlates of helping behavior, and most have been examined by the single variable technique (Gergen, Gergen, & Meter, 1972). Among these variables, the prominent traits to which psychometric methods have been applied are: social values; the needs for achievement, affiliation, and approval; dominance; locus of control; authoritarianism; social responsibility; social desirability; Machiavellianism; and religiosity (e.g. theism, church affiliation and attendance). Relationships have easily been obtained by the correlational method when rating or scale measures of altruistic attitudes alone have been assessed as a predictive index of the individual's likelihood to behave altruistically, and these results are viewed as inconclusive evidence (Krebs, 1970). In contrast, when researchers attempted to demonstrate a relationship between attitude and behavior measures the results have followed the situation-specific findings attributed to Hartshorne and May (1928) in relation to other moral behaviors. Most studies have failed to obtain a relationship (e.g. Bickman, Teger, Gabriele, McLaughlin, Berger, & Sunaday, 1973; Darley & Batson, 1973; Darley & Latané, 1968; Gaertner, 1973; Korte, 1969; Yakimovich & Saltz, 1971). There are notable exceptions to these findings for the locus of control variable (Gore &
Rotter, 1963; Midlarsky, 1968b, 1971; Midlarsky & Midlarsky, 1973; Staub, 1968; Strickland, 1965) and Schwartz's (1968b) ascription of responsibility factor (Schwartz, 1968b, 1973, 1974; Schwartz & Clausen, 1970). The subjects who obtained higher scores on these trait-oriented measures were significantly more likely to act in a prosocial manner.

Demographic and Social Role Variables

In the third approach to specifying determinants which induce or inhibit prosocial behavior, the sociobiographical factors in the subject's background history are considered. A substantial listing of these variables includes sex; age; number of siblings; ordinal position; extended family; social class; national origin; and residence. In the early literature, these antecedent factors received minor attention and were viewed primarily as incidental correlates rather than as significant predictors of altruism. Although trends were found in the explored relationships for sex, age, ordinal position, social class, and international differences, Krebs (1970) assessed the findings as "usually difficult to interpret" (p. 286) and stated the need for further, more precise research on this class of variables. Gergen et al. (1972) also recommended a less constricted use of these attributes, which they organized as the demographic aspect in their classification of "historically dependent dispositions" (p. 105). In their criticism of the dominant practice of concentrating
on isolated predictors and in this manner masking important interactions, Gergen and his colleagues suggested the use of "moderator variables" (Kogan & Wallach, 1964, p. 119) such as sex, which served to spur some attention to a multi-variable approach. When Latané and Darley (1970) reported that although not one of numerous personality measures demonstrated a relationship with helping action while two significant correlations were obtained from the subject's biographical history, increased interest in this domain emerged.

Summary of General Research

In the past decade of intensive investigation, a number of correlates, antecedents, and mechanisms have been identified, and theoretical perspectives have burgeoned. Overall, it has been shown that slight variations in the experimental situation produce changes in rates of helping, while personality traits as related to moral behaviors seem to be more situation-specific than fixed characteristics. The literature has been characterized by a comparative lack of attention to social roles and demographic attributes in favor of situational determinants and personality characteristics. The failure of the individual difference trait variables to predict helping behavior, and the success of situational factors in eliciting altruistic responses has currently given weight to the latter as the major influence on prosocial action.
However, only general trends can be asserted, as conflicting results and replication failures continue. The need to use multiple measures and to abandon separate approaches has been emphasized. Gergen et al. (1972) declared, "We must lay final stress on the all important interrelation between personal dispositions and situation" (p. 126). The failure of the research to specify causality either to induced situational states or inherent personality traits indicates the complexity of the issue, and points to a network of interdependent elements involved in this aspect of human and infrahuman social behavior.

This chapter has served to introduce the concept of altruism and to trace its historical roots. Prosocial forms of behavior have been delineated, and an overview of the dominant research issues has been presented. In the next chapter, the research relevant to the present study will be discussed.
CHAPTER II
REVIEW OF THE LITERATURE

The importance of a fresh perspective and an integrated approach in the continued exploration for functional relationships and causal determinants of altruism is clearly indicated by the overview of the general literature. Therefore, in the present study, independent variables from each of the three domains of situational determinants, personality characteristics, and demographic attributes/social roles will be examined by multiple measures of the dependent variable, helping behavior. The research will be directed toward the search for possible individual difference predictors of helping and situations in which to test them.

In the following sections, the research relevant to the five independent variables selected for investigation will be presented. The three experimental variables are: Residence, Overload, and Sex of Subject. The two trait variables to be correlated with the dependent measure are Cognitive Interference (as measured by the Stroop Color and Word Test) and Cognitive Complexity (as measured by the Barron Complexity Scale). These variables have been chosen as concomitant factors in the interrelation between person and situation. It will be seen that the antecedent attribute of residence has been considered a basic element in the problem
of the failure to help in emergency episodes. The theoretical concept of overload provides a psychological dimension of the individual's experiences with his environment to account for differences in the tone of city and town. The subject's sex has been demonstrated as an inconsistent but sometimes powerful influence on helping. The trait variables represent the exploration of stylistic tendencies which have related to social behavior and are untested in the altruistic domain. The first factor to be discussed is the demographic attribute of residence. Background material pertinent to the interests in environments will be followed by the theoretical and empirical research.

The Demographic Residence Variable

**Urbanism and Nonintervention**

The murder of Kitty Genovese (March 13, 1964) in New York City provided the specific impetus for the revived interest in altruism. The incident became a cause célèbre: the case had enormous national impact, received a singular amount of publicity and documentation, and served as the source for varied creative genre. The bizarre episode has become a classical chronicle of human social behavior. A recap of the event is as follows:

Twenty-eight-year old Catherine Genovese is viciously attacked as she returns home from her job at 3:00 a.m. There are 38 of her neighbors in the apartment building who
hear her repeated screams for help over the half-hour period of her slaying. They stand immobilized by their windows, and no one either comes to the dying girl's aid or calls the police to summon assistance (Gansberg, 1964).

A recent front-page headline stated: "A Model's Dying Screams Are Ignored At the Site of Kitty Genovese's Murder" (New York Times, Dec. 27, 1974). In the article the reporter (McFadden, 1974) told of the 25-year-old girl's attack in an apartment which virtually overlooks the scene of the Genovese murder 10 years ago. The focal point is the report of the next-door neighbor who recalled having heard Kitty Genovese's screams, and who described the complete sequence of the current bizarre crime. The witness, Mrs. Hartmann, said she didn't call the police because she believed the building super had heard the commotion and would himself call. When asked why she didn't call the police when she heard Kitty Genovese's screams, Mrs. Hartmann said because she speaks English with a foreign accent and believed other tenants would call and be more easily understood. Mrs. Hartmann attains illustrative citation as the silent, passive witness in two crisis situations which ended with tragic consequences for both imperiled victims.

The editorialized publicity in the Genovese case revolved around the theme of deficiencies in modern man. The professionals supplied explanations such as, "A disaster syndrome;"
"The gratification of unconscious sadistic impulses;" "The Cold Society;" "Indifference;" "Apathy" (Latané & Darley, 1970, p. 2). Wainwright (1964) emphasized the statement reportedly made by several witnesses over the days of police investigation: "People told us they just didn't want to get involved" (p. 21). Ratcliffe (1966) characterized our culture as "a society increasingly committed to the minimization of personal responsibility" (p. xv). A host of the accusations and attributions for the lack of socially responsible action were focused on a specific target: urbanism. Causality was assigned to the effect of the megalopolis, or to metropolitan living. The social anonymity inherent in urban environments was declared as fostering an encapsulated outlook, and in turn, the diminution of an individual's concern for the hapless and helpless. Most professionals and ashamed New Yorkers agreed that interpersonal relationships were deformed within urban boundaries. The public's response followed an emotional pattern directed toward censure. People who came from small towns said it could never happen back there (Rosenthal, 1964a, 1964b).

Some professionals questioned the assumption which attacked urbanites as singularly irresponsible in such situations. Rosenthal (1964b) stated, "That only under certain situations and in response to certain reflexes or certain beliefs will a man step out of his shell toward his brother"
(p. 81). He suspected that the big-city variety of apathy displayed in the Genovese incident was special only in the respect that there were more people to turn away from each other, and that some forms of apathy that perhaps exist in villages and towns do not exist in major cities such as New York or Tokyo or Bombay. Milgram and Hollander (1964) critically referred to the finger of blame pointed at the urbanite: "The abrasiveness of urban life can not be argued; it is not true, however, that personal relationships are necessarily inferior in the city. They are merely organized on a different principle" (p. 602). Latané and Darley (1970) also decried that such events were attributable to the urbanite per se: "They imply the emergence of a new kind of man, 'homo urbanis,' who has adapted to the pressures caused by the increasing urbanization of life by turning other people into objects, by losing human feeling for them, and by rejecting the moral imperative to help another in distress . . . We think not . . . People sometimes help and sometimes don't" (pp. 3-4). At a conference called to discuss the apparent lack of Samaritanism displayed in the Genovese case (University of Chicago, 1965), Gusfield noted a paradox: he called attention to the civil rights movement in general, and in particular, he referred to the march on Selma-Montgomery that had just taken place. Gusfield's (1966) reproof centered on the large-scale moral intervention shown
by the mass of disinterested helpers; a heterogeneous aggregate from cities and towns united in response to victimized fellow Americans.

Rural versus Urban Modes of Life

Through the years, theorists have been concerned with the human condition as it relates to urban experience. Durkheim (1897/1951) described how living in cities could lead to a sense of isolation and lostness in man, while Weber (1921/1958) discussed under what conditions cities could be a creative and positive force on men's common lives. Whereas Weber discussed cities in structural terms, Simmel's (1903/1950) descriptions were psychological. For Simmel, all urban life contained an excess of psychic stimulation. Consequently, men resorted to defensive maneuvers, such as inhibiting emotional reactions to the people around them. As Simmel saw it, in order to manage the complexities of urban life, man's relationship to other men was based on unemotional, reasoned, and functional terms.

Wirth (1938), as Simmel (1903/1950) before him, theorized about the urban fragmentation process. Wirth developed a theoretical analysis of the city as a social entity, a form of human association. He postulated the three theoretical variables of number of people, density of settlement, and degree of heterogeneity as the criteria for describing urbanism as a way of life. When considered in ecological perspec-
tive, Wirth pointed to the positive force of city life by its functional characteristics, which derive largely from the effect of numbers and density. However, as a form of social organization, Wirth characterized interpersonal relationships as impersonal, superficial, transitory, and segmental; of fragmented character and utilitarian accent.

The ideal-typical polar concepts of rural-urban differences are explicit in Wirth's (1956) theory of population characteristics. Congruent to this dichotomy, it is tempting to characterize the urban way of life as constituted by physical proximity but psychological isolation and social anonymity, and contrast the rural mode as characterized by relative social isolation but a sense of community, social consciousness and involvement. However, Wirth stated: "To set up ideal-typical polar concepts . . . does not justify mistaking the hypothetical characteristics attributed to the urban and rural modes of life for established facts, as has so often been done . . . Rather it suggests certain hypotheses to be tested in the light of empirical evidence which we must assiduously gather" (p. 223).

Both Simmel's (1903/1950) and Wirth's (1938, 1956) theories of urban conditions relate to the altruism research through the differing quality of social encounters ascribed to urban dwellers as compared to rural residents. Milgram (1970) stated that Wirth's demographic facts and Simmel's
psychological postulates are seen to condition all aspects of our urban experience. However, like Wirth, he pointed out that the absence of solid experimental evidence left the question of alleged environmental differences an open one. Milgram emphasized the need to test the responsiveness of city and town dwellers in more everyday situations rather than in crisis settings of dramatic need.

Both Milgram (1970) and Latané and Darley (1970) suggested that factors in the social environment rather than intrinsic differences in the personalities of big city residents could account for the likelihood of greater prosocial behavior by small town dwellers. Milgram proposed that less disparity in treatment of friends and strangers should prevail in towns than does in cities, and therefore more willingness and time allotment should be provided in socially responsible action toward those in need. He ascribed to urban residents the development of "new norms of uninvolve- ment" (p. 1464), which have evolved as a strategy for handling excessive impinging stimuli continually present in the urban environment. Like Simmel's (1903/1950) description, Milgram hypothesized that these modes of responding become generalized, and consequently lead to deficiencies in socially responsible involvement.

Latané and Darley (1970) provided experimental evidence for social inhibition effects over a wide variety of contrived
situations in their manipulations of group size and composition. They demonstrated that the old adage "There's safety in numbers" (1969, p. 266) appears to be illusory in the context of prosocial action, as the presence of multiple bystanders in the vicinity of ambiguous emergency events resulted in significant decreases in intervention rates. Another condition specified by these investigators as inhibiting prosocial behavior is social anonymity, in which the victim and the potential helper are total strangers. This hypothesis was tested (Darley & Latané, 1968) with subjects who were alone and in varying sized groups. The researchers found that the decreased likelihood and speed of helping response was directly dependent on the condition of anonymity. The group factors did not account for differences in helping, but rather, the strong significant effect was that the victim was helped less when the subject(s) and the victim had never met. Latané and Darley (1970) reasoned that the failure to intervene appears more characteristic of large cities, where these conditions inhere, than of rural areas. They conjectured that perhaps city dwellers are less likely to help in general than townspeople, and that social inhibition effects could be less strong for townspeople than for urbanites. They stated that future research should provide the answers. In summary of their research, Latané and Darley (1970) said: "There was some hint, minor to be sure, that subjects from
large cities were less likely to intervene than subjects from the suburbs or from small towns . . . We see no reason to expect a different pattern of results from nonurban subjects, although the intensity of effect might be less strong" (p. 123).

It can be seen from the preceding discourse on urbanism and nonintervention and rural versus urban modes of life that researchers have theorized in line with common notions for the likelihood of superior rural responsiveness in pro-social situations. The empirical research focusing on environmental differences will be reviewed next.

Residence and Altruism

Researchers have typically allowed the relevant demographic variables in the subject's personal history to vary randomly, assuming a confluence of background experiences. Therefore, there is a limited amount of objective research directed toward population characteristics as an influence on helping behavior. It is indicated by the literature that primarily, the residence studies are simple comparisons in which the helping measures sought merely to establish whether more or less helping was provided (i.e. calculated in terms of absolute difference in response frequencies and analyzed by chi square procedures). However, the important element characterizing the comparisons is that the responses of individual subjects as potential helpers usually are assessed
rather than those of varying sized groups and associated factors. An individual's spontaneous helping response, under conditions of anonymity, is the consideration in the present study. It has been demonstrated in the general empirical research that a sizeable proportion of subjects who were alone have failed to respond prosocially, and especially when the person requiring the help was a stranger (e.g. Darley & Batson, 1973; Harris & Huang, 1973a, 1973b; Kaufman, 1968; Langer & Abelson, 1972; Latané, 1967; Latané & Darley, 1968; Latané & Rodin, 1969; Staub, 1970; Staub & Baer, 1974). A further distinction to be made for individual subject response measures is help provided to an unknown other as opposed to within-group helping of friend-benefactor to friend-recipient. In two of the residence studies this within-group type of altruistic response is assessed, and the possible influence of the subject's cohesiveness with the group members as activating prosocial response is posited by the researchers (Bickman et al., 1973; Friedrichs, 1960).

The residence studies can be categorized as follows: (a) studies which were designed as replications of previously reported research; (b) comparisons between cities, or among communities, or of cities and smaller towns in the suburban rings surrounding the central city; (c) true comparisons of rural-urban differences and related community characteristics; (d) density and social behavior studies. Each will be presented in turn.
Replications. The most consistent finding among the residence studies is the significantly higher percentage of subjects reported as helpers, to a stranger, in Atlanta (Georgia), Knoxville (Tennessee), Tallahassee (Florida), and in unspecified cities in Illinois in comparison to the mecca of urban life, New York. A number of studies were designed as replications of previously reported research conducted in New York, and the findings are at odds with the original results.

Franklin (1973) attempted to replicate Bickman's (1971) field study which was conducted in phone booths located in Grand Central Station and Kennedy Airport. Franklin measured the frequency with which adult callers returned "lost" dimes planted by a confederate in the Atlanta Airport for the effects of the accomplice's status on the subject's honesty. In contrast to Bickman's findings of 58% "honest" subjects who returned the dime to the accomplice when asked if the change had been found, 85% of the Atlanta sample did so.

Morgan (1973) reported on a partial replication and extension of Latané's (1970) Manhattan study, in which a confederate requested minor forms of assistance from pedestrians in public places. Morgan varied the accomplice's appearance along several dimensions under the two conditions of "straight" or "hip." Even with these additions, as possible inhibitors of helping responses, Morgan found a
significantly higher response to the request for one's name, and an overall higher compliance rate in Knoxville for that request or for inquiry as to the time of day. He speculated on the popular stereotype of the "friendly South" in contrast to the "coldness" of New York, and stated, "While explaining nothing, such a demonstration may suggest a method of quantifying these intangible, subjective impressions" (p. 64). Morgan was referring to the fact that there has not been systematic specification of the qualitative residence variable in any behavioral endeavor to date.

Merrens (1973) investigated the relationship between community size and helping behavior by determining the generality of the New York City findings in a full replication of Latané's (1970) simple exploration. Merrens compared responses in the requests for a dime, change of a quarter, directions to the post office, or the subject's name on the streets of midwestern cities in Illinois (100,000 population) and smaller towns in the environs of these cities (under 10,000 population). Significantly greater helping behavior was demonstrated in the midwestern cities and towns than in New York for six of the eight comparisons, while in the other two cases no significant differences were observed. Comparable response frequencies were obtained between midwestern areas of cities and towns. The type of request did not affect response rates in the midwest, in contrast to New York, where
fewer subjects supplied their names or provided directions to the stranger experimenter.

Clark and Word (1972) conducted laboratory experiments in Tallahassee in replication of Latané and Rodin's (1969) "lady in distress" situation. In this study, presented under the guise of a market research survey, while the male subjects were filling out a preliminary questionnaire, the "market research representative" female experimenter staged a fall in the next room. Bystander intervention as influenced by group size was the focal aspect of the original design. Helping behavior was computed by noting the proportion of helpers and the subject's speed of response to hearing the confederate's fall. In simulation of many real-world emergency events, ambiguous features were prominent in Latané and Rodin's design. Clark and Word's primary purpose was to investigate effects of the ambiguity variable on helping, and they eliminated the ambiguous elements. For example, the prerecorded taped episode in the original study was modified into a "live" crash and subsequent fall by an accomplice. Neither research effort was directed to assessing environmental differences. However, whereas Latané and Rodin reported the frequency of helping as ranging from 7% to 70% under the varying conditions tested, in striking contrast all of Clark and Word's subjects helped (for a 93% magnitude of difference in comparable conditions between the
two settings). Clark and Word offered a possible population characteristics explanation of differences in the atmosphere and physical arrangements of Tallahassee to account for their effects.

The above replication studies demonstrate that prosocial responses were provided significantly more in central cities of the south and midwest than in New York City. The research of comparisons between cities, among communities, or of cities and smaller towns in the suburban rings surrounding the central city will now be discussed.

**Comparisons.** Forbes and Gromoll (1971) used the lost-letter technique (Milgram, Mann, & Harter, 1965) to test the hypothesis that large-city dwellers are less responsive to another's need than small-town residents. The results of two efforts did not support the hypothesis. The lost-letter technique is an indirect method of measuring altruistic response, in which addressed and sealed letters are dropped in conspicuous places and the frequency of returns is the dependent measure of helping behavior. In the first study, Forbes and Gromoll compared the return rates from stamped letters dropped in large midwestern cities in Missouri and Ohio (St. Louis and Cincinnati) with those from moderate-sized cities in Illinois (Peoria and Decatur) and very small towns in central Illinois (average population less than 1000). When a bias in the design was accounted for, the researchers
reported that there was no relationship between return rates and community size. In the second study, significantly fewer returns for unstamped letters were received from the small towns than from either the large or moderate-sized cities. Moreover, the cities were identical in return rates. The findings were opposite to predicted effects, and discrepant from Milgram's (1970) supposition that the disparity between friend and stranger would be less in small towns, but congruent to Darley & Latané's (1968) finding that strangers are helped less often than friends or acquaintances. Forbes and Gromoll (1971) made this latter attribution for their results.

Hackler, Ho, and Urquhart-Ross (1974) conducted a direct mail survey of 12 communities in Edmonton, Alberta to explore whether interaction within a community is related to the willingness to intervene. The expected results were not found, but contrary to anticipation it was revealed that residents among the tracts were not "neighborly." In response to a hypothetical situation, the subjects were asked to assume that they and their neighbors were either friends, or acquaintances, or strangers. Although intervention by neighbors was the proper course of action, it was found that as intimacy declined so did attitudes toward the willingness to intervene. A consensus for intervention was reported only under close friendship. As strangers, 50% of the neighbors indicated that they would not intervene.
From the above studies it can be seen that prosocial responses to a stranger have not conformed to the researchers' predictions. There are three further research efforts undertaken to explore environmental differences between city and town. These are unpublished, pilot studies conducted by students under Milgram's tutelage.

In the first study, as cited by Milgram (1970), Altman, Levine, Nadian, and Villena hypothesized that trust of strangers would be greater in areas other than the metropolitan center of New York City. Their feeling that city dwellers have a heightened sense of personal vulnerability is supported by urban crime rate statistics. The researchers compared gaining entry into homes to use the telephone in middle-income housing developments in Manhattan and in suburban communities north of the city. It was found that the minimum increase of entry attained in the suburbs was twice the amount as in the city, and female experimenters were more successful than males in both areas.

In the second study cited by Milgram (1970), McKenna and Morgenthau explored the willingness to do favors for strangers that entailed a degree of time and effort but no cost, in contrast to the factor of reality-based fear of danger incorporated in the Altman et al. (1970) design. In this study, telephone calls were made to housewives and salesgirls (in women's apparel shops) in the cities of New
York, Philadelphia, and Chicago, and in 37 smaller towns outside of these city centers. The female caller asked for information about the area, and the subject's degree of helpfulness was assessed. It was reported that city dwellers were less helpful than town dwellers, and housewives were less cooperative than salesgirls regardless of residence area. However, the absolute level of helpfulness for urban subjects was found to be quite high and the quantitative differences between cities and towns less than expected. Milgram (1970) expressed a cautionary note, reiterated the need for experimental research, and stated: "Cooperativeness for urban subjects . . . does not accord with the stereotype of the urbanite as aloof, self-centered, and unwilling to help strangers" (p. 1465).

Lucido and Takooshian (personal communication, November 19, 1974) measured social involvement. A nine-year-old child asked passersby in central areas of Manhattan or in two small suburban towns to help her call home. Contrary to the a priori predictions that almost everyone would help a lost child, but consistent with the intermediate level of helping responses reported for adult victims who are strangers to the subject (e.g. Darley & Batson, 1973; Harris & Huang, 1973b; Langer & Abelson, 1972), 48% of the subjects helped while 52% refused. The authors report a strong significant effect favoring the town residents when the data was analyzed.
in terms of city vs. town response, but also reveal a relationship between helping behavior and the number of people in the intermediate vicinity of the request. This effect indicates that the number of available helpers was not comparable in the two locales, and demonstrates a methodological flaw in design between two nonstandardized settings in a measure of individual subject helping responses.

The lost child study is the last of the pilot research in which differences between urban centers and their suburban rings were explored. It can be seen that environmental effects often are accountable by situational variations.

**Rural-Urban differences and related characteristics.** There are two studies that directly pertain to true rural-urban differences. One is an early and complex correlational exploration (Friedrichs, 1960), while the other is a most recent and simple behavioral assessment (Schneider & Mockus, 1974). The first is a within-group measure of professed altruistic intent toward fellow fraternity brothers, and the second is an unsolicited measure of helping under conditions of social anonymity. Neither obtained significant differences in support of rural superiority of involvement. Each of the studies will be discussed below, but will be separated in presentation by other pertinent research.

Friedrichs' (1960) objective design of paper-and-pencil measures conceived to tap factors related to altruism reflects
methodological sophistication. However, the validity of the results is questioned by Krebs (1970), as the questionnaire did not correlate to a high degree with the altruism ratings. Nevertheless, two formulations bear relevance to the present study. First, Friedrichs' multicategory quantification of a factor termed "Urbanization" represents the sole research attempt to systematically delineate the residence variable. Also, the classification is geared to the influence of the stable environment of the student subject's youth as opposed to the possible come-lately experience of suburban habitation for residents of the general populace. The categories range in increasing degrees from minimum to maximum urbanization as follows: farm; rural town; suburb; small city (10,000 - 100,000); and large city (over 100,000). Friedrichs reported a trend in the direction of minimum urbanization and altruistic attitudes, and obtained a significant effect between the small and large city categories. He stated the limitations for generalizability of the findings overall, in that the small surface correlates tended to show the influence of friendship as well as knowledge of "proper" response. The second pertinent formulation is Friedrichs' interpretation of the urbanization-altruism relationship, in terms of the concept of insularity. In this context, insularity represents a combination of rapport within one's family group along with a lack of rapport with one's secondary environment.
Friedrichs suggested that future research be directed to assessing the relative in-group or out-group nature of the reference group involved, as maximum in-group cohesion may well be balanced by minimum out-group cohesion (Sumner, 1906). Only one study, that of Feldman (1968), has attended to the important essence of this concept in an investigation of international differences in altruism. Feldman interpreted his results in terms of one's inclusive in-group and exclusive out-group perceptions in helping strangers.

The size of the community in which the subject grew up is a long-range correlate of altruism, and Feldman (1968) pointed to the need for identifying and examining such specific antecedent variables among subjects with more homogeneous backgrounds. Darley and Latané (1968) reported size of community as significantly and inversely correlated with the likelihood and speed of helping response among college student subjects in New York, while Gelfand, Hartmann, Walder, and Page (1973) found this factor marginally significant in a naturalistic study in Utah. In both studies, the finding was retrospectively discovered from the autobiographical information gathered as a postexperimental measure. The fact that Darley and Latané's subjects invariably were reared in the suburban rings of New York City also restricts the generalizability of their finding, while Gelfand et al. cautioned that conclusions from their interview procedures should be regarded as "highly tentative" (p. 280). However, both of these post hoc results directed
to community size as well as Friedrichs' (1960) focus on environmental categories serve as a springboard for quantifying and examining the rural vs. urban residence variable.

In the second study that examined rural-urban differences in helping behavior, Schneider and Mockus (1974) underscored their failure to find a difference. These researchers reported a reversal in results from predicted effects, as a somewhat higher percentage of help was provided by urban subjects (44%) than by rural subjects (39%). The incidence of altruism was measured by the number of adult pedestrians who helped pick up dropped grocery items in commercial districts of urban Toronto, Canada, and on the main streets of isolated rural towns in Southwestern Ontario. Schneider and Mockus speculated about their results as discrepant from expectations based on theory (Milgram, 1970) and findings between New York and other locales (Merrens, 1973), apparently neither able to reconcile their results with the possibility of greater urban helping nor cognizant that perhaps there are real differences between actual rural areas and smaller urban places. The authors suggested that community size and altruism is moderated by "certain factors, such as the atmosphere" (p. 294). They also presented a footnote to cite results of a poll, in which 78% of 263 university students indicated the greater likelihood of a person receiving help from a stranger in a small town than in a big city, whereas only 6% supported the reverse position.
It can be seen that the residence studies which directly investigated environmental differences in helping behavior often do not confirm the commonly held belief that city dwellers are less responsive to the needs of their fellows than either small town dwellers or rural residents. Rather, the lack of precise specification of the rural-urban residence variable and the need for further inquiry into the stereotyped image of the "detached urbanite" in helping situations of social anonymity is revealed.

Density and social behavior. Some additional research pertains to the demographic residence variable and social behavior as influenced by density. Although the distinction between density (as a spatial limitation) and crowding (as an experiential state) has only recently been explicated (Choi, Mirjafari, & Weaver, in press; Freedman, Levy, Buchanan, & Price, 1972; Stokols, 1972), most researchers have considered the psychosocial consequences. Willems (1973) attributed the "attenuation of social involvement" (p. 214) to the adverse effects of size and density of groups and populations. However, some recent studies have failed to support the notion of high density as a stressor (e.g. Smith & Haythorn, 1972). On the basis of experimental data (Freedman et al., 1972; Freedman, Heshka, & Levy, 1973), it is suggested that density serves to magnify an individual's typical response rather than act as a positive or negative factor itself.
Three studies on density and social behavior are relevant to the present research. Schmitt (1957) reported a close association between population density and juvenile delinquency and adult crime in Honolulu. He concluded that high densities predispose a resident population to illegal acts, as density tends to promote friction and consequently results in a loss of primary social controls. In subsequent studies on the adverse effects of density, researchers investigated a number of metropolitan centers: Chicago (Galle, Gove, & McPherson, 1972; Winsborough, 1965), New York (Freedman et al., 1973) and Honolulu (Schmitt, 1966). In all cases except for Honolulu, density was mediated by sociodemographic variables (e.g. socioeconomic status or educational level), and the effects were partialled out to a nonsignificant relationship by accounting for these factors. In Honolulu alone, where the population density is excessive in proportion to land area, a distinct positive correlation remained between density and antisocial acts.

In contrast to Schmitt's (1957, 1966) findings, in an experimental study conducted in Hawaii, MacDonald and Oden (1973) failed to find adverse effects as a result of extreme crowding in living conditions and exposure to other stressors over an intensive 12-week period. These investigators reported enhanced performance in some facets of functioning rather than demonstrations of maladaptive behaviors. They
attributed the unexpected findings to the stability of the subjects' personalities, as indicated by preexperimental background checks. Congruent to the Freedman et al. (1972, 1973) conception, MacDonald and Oden suggested that adverse effects are not a result of the physical environment per se, but of the individual's perception and mode of handling a difficult situation.

Bickman et al. (1973) studied density and helping behavior. The researchers focused on social relationships in resident college dormitories, and posited cohesive group identification as the within-group factor for accentuated altruistic responses in low-density units. They pointed to the relatively homogeneous sample of a college student population as providing controls for potential confounding by factors such as age and education, and checked demographic information for similarity of backgrounds. Bickman et al. related the association between high dorm density and lessened helping to Milgram's (1970) theoretical postulate of overload, as analogous to the experience of living in cities.

The above studies of helping behavior have introduced the person into the situation by relating positive and negative effects to the individual's mode of dealing with his environment. The concept of overload is a situational factor of the urban person's experience, and the second of the five independent variables in the present study.
The Overload Variable

The Concept of Overload

Overload is a coordinate variable for the exploration of rural-urban differences in helping behavior. The term refers to an excess of inputs from environmental stimuli over the individual's processing capacity. Number, density, and heterogeneity are demographic facts in the circumstances of residence, and as such are external to the individual. Overload provides a psychological link of the individual's experience to these factors that Wirth postulated (from the sociologist's view) to affect the interpersonal aspects of urban life. Simmel's (1903/1950) description of the defensive maneuvers adopted by urban dwellers in response to excessive stimulation can be seen as the unformulated specification of the elements incorporated in the theory. Milgram (1970) formulated the concept as an explanation for the deficiencies in socially responsible behavior observed in major urban centers at times of emergency events such as the Kitty Genovese incident.

Overload is conjectured to deform daily life as it impinges on several levels: the evolution of social norms, cognitive functioning, role performance, and competition for the use of scarce facilities (e.g. subway rush, traffic jams). The atmosphere of urban life is comprised of a continuous set of encounters with overload in the simultaneous or
numerous successive stimulus inputs. In order to conserve psychic energy, a system must set priorities and make choices, and it follows that adaptations to overload gradually occur. Applicable strategies proposed by Milgram are: (a) less time is allocated to each stimulus input; (b) inputs defined as low-priority are disregarded, and principles of selectivity are formulated for investment of time and energy (such as purposeful navigation to personal goals); (c) filtering devices are used to diminish the intensity of inputs, and therefore involvement with others is weak and relatively superficial. These three means of adaptation do not appear to be mutually exclusive, and all center around an individual's focus toward self rather than to other.

The consequences of adaptation to overload are seen by Milgram (1970) as a lack of appropriate behavioral response in situations requiring moral and social involvement. He stated: "The ultimate adaptation to an overloaded social environment is to totally disregard the needs, interests, and demands of those whom one does not define as relevant to the satisfaction of personal needs, and to develop highly efficient perceptual means of determining whether an individual falls into the category of friend or stranger" (p. 1462). Therefore, Milgram hypothesized, the lesser exposure to situational overload by small town and rural dwellers would foster the likelihood of a greater sense of social involvement
and socially responsible action toward an unknown other in need of help.

**Empirical Research**

The overload variable has been directly examined in two laboratory studies. In Krupat and Epstein's (1973) study entitled "I'm Too Busy," the concept of overload was related to the processing of inputs and to nonemergency helping behavior. The researchers investigated the effects of stimulus overload on behavior by simulating task situations in which the variable was manipulated. The time spent in writing helping letters was assessed for male undergraduate subjects who were either overloaded (High Overload) with reading and evaluation tasks or not overloaded (Low Overload). Krupat and Epstein hypothesized that the overloaded subjects would spend less time per stimulus input, make a greater distinction between important and not important tasks, and be less willing to be diverted from their tasks to write helping letters. Two of the three predictions were supported. Although there was no evidence for selectivity of inputs, overload significantly reduced the time and effort given to inputs overall, and a strong significant difference was demonstrated in the number of nonoverloaded subjects who wrote helping letters (81%) as opposed to those overloaded (39%).
Sherrod and Downs (1974) examined the relationship between stimulus overload, perceived control, and helping behavior. Their study was directed toward the possibility that while exposure to intense urban-like stimuli may make people less altruistic, a perception of control over the environment can reduce its negative effects and perhaps its aversive quality. A respective increase in altruism was hypothesized in the three manipulated conditions of overload, overload with perceived control, and no overload for the female student subjects after a 15-minute period of imposed audio-visual tasks. In all conditions, the subjects simultaneously read a prose passage, underlined the errors, listened to an audio tape of numbers, and noted designated ones. The numbers on the tape were superimposed over a background sound track of music and unrelated speech in the overload and perceived control conditions, while in no overload the background consisted of soothing white noise. In the perceived control condition the subject was advised that she could signal the experimenter to turn off the background sound, but it would be preferable not to do so. The altruism measure was the number of arithmetic problems worked by the subject in response to a confederate's request for help in pretesting materials. The data did not support the idea that perceived control would alter the meaning of the stimulus, but demonstrated the effects of stimulus overload and perceived
control on helping behavior in a task situation. The one-way analysis of variance revealed a significant difference across conditions, with a respective increase in the three group means.

Several other studies indirectly pertain to the concept of overload. Some researchers have related their findings to consequences of exposure to intense urban stimuli. Allen (1972) directed research to some dynamics of helping in the naturalistic field setting of New York City subways. Strong social inhibition effects were obtained by manipulated conditions of threat, in which wrong information supplied by a confederate induced threat of either a physical nature or of embarrassment. Allen attributed the findings to the consequences of urban living. He pointed to the city dweller's "desensitization and conditioning to aspects of his environment" (p. 33) as well as the urban resident's efforts to preserve his anonymity. Allen related these factors to the increased probability that the urbanite would unintentionally ignore events that might attract the attention of a rural person and result in greater helping behavior.

Clark and Word (1974) demonstrated the salience of situational cues perceived by the bystander as an important determinant of helping responses, and related the finding to large urban environments where stimulus overload abounds and often affects the accurate interpretation of an emergency
event. Like Allen, these researchers proposed that when city dwellers counter overload by adaptive behaviors, such as screening out low-priority inputs, they move about with a sort of "tunnel vision" (p. 286), which increases the probability that a greater percentage of onlookers would fail to intervene.

First cited by Milgram (1970) and subsequently reported in the literature, Gaertner and Bickman (1971) examined helping behavior across ethnic lines in New York City. They found that confederates perceived as white on the telephone obtained significantly more assistance than those perceived as black, and Milgram (1970) suggested that the results could be accounted for in terms of an additional means of urban adaptation to overload; the subject limited his "span of sympathy" (p. 1463) by ethnic allegiance. However, a replication by Clark (1974), who tested discrimination in a Southern population, revealed that there are other factors in play. Victims of both sexes were used rather than only male callers, and while black males elicited less help from southern white subjects than white males, female victims were helped significantly more, regardless of race, than were males. Moreover, studies in urban environments have provided more support for cross-racial helping than evidence for discriminative aid (e.g. Allen, 1972; Bickman & Kamzan, 1973; Feldman & Hilterman, 1974; Harris, Liguori, & Stack,
In some studies compatible variables have been examined and effects have been reported that are analogous to overload. Glass and Singer (1972) related cognitions to behavior in a series of laboratory experiments. The work was directed to physical and social stressors in urban environments, and focused on three central concepts in the study of antecedents and consequences of stress: direct effects; adaptation; and aftereffects. The investigators found that adaptation to stress occurred rapidly, and by adaptation, direct stress effects were minimized. This habituation served to maintain the subject's level of task performance for a single task, while a somewhat reduced level was evidenced in the case of a second task imposed simultaneously. The important discovery was adverse aftereffects, which remained and were detectable in behavior. An examination of postexperimental test scores revealed subsequent impaired cognitive performance.

Darley and Batson (1973) simulated the Good Samaritan parable with seminary student subjects and manipulated a situational variable termed "hurry." In high hurry, the subject was informed he was behind schedule to record a talk, while in intermediate hurry he was on time, and in the low condition he had time to spare. The helping measure was the subject's en route response to a confederate's staged illness.
The results revealed that 60% of the prospective theologians did not offer any form of assistance. The significant effects for the "hurry" variable were attributed to time pressures. For some subjects who literally stepped over the victim, Darley and Batson proposed that a "cognitive narrowing" (Tolman, 1948) had occurred, and by this process the emergency was not perceived as requiring an ethical decision. For the other nonhelping subjects, the situation induced a conflict in allegiance either to the victim or to the experimenter, and conflict resolution resulted in ignoring the victim. Both attributions are analogous to adaptive mechanisms used to counter overload, which is seen to impinge on levels of cognitive functioning and role performance and to deform social involvement.

Weiner's (1974) demographic survey of helping behavior in urban Oahu, Hawaii was directed to 450 adult subjects of both sexes randomly selected from the records of three defined populations of known helpers. In a focal questionnaire item, a stranded motorist's predicament was described, and the accompanying list of yes or no helping responses included specific reasons which characterized that response. Originally presented to 535 licensed drivers in prominent mainland urban centers (Firestone Co., 1972), the comparative results showed that while the mainland sample was predominantly unwilling to help (54%), most of Hawaii's subjects
answered affirmatively (96%). Many of the males among these respondents had been cited for just this kind of aid. However, the Hawaii sample data revealed that decisions to help were viewed in a conditional manner by most of these help-oriented persons (75%). Cost factors such as risk of personal harm or lack of automotive skills were almost entirely a female concern, while the primary response selected by a sizeable proportion of these subjects was undifferentiated by sex, and was, "Yes, I'll help if I'm not too busy." The statement is compatible with the Darley and Batson "hurry" variable and Milgram's (1970) ascription for new urban norms of uninvolvment; the evolution of temporal norms in adherence to plans and schedules as the urbanite's primary priority.

In the above studies the demographic circumstances of the individual were related to his experience through the situational characteristics of stimulus overload. In contrast to the mixed findings of the residence research, consistent effects are seen in the use of adaptive strategies for coping with the ambiance and pace of the urban environment. The defensive maneuvers adopted by urbanites as protection against continual and excessive impinging environmental stimuli are shown to have negative consequences for prosocial involvement.

So far, the literature reviewed has pertained to the rural-urban person per se, without considering the possible effect of the subject's sex as a determinant of helping
behavior. In our culture, socialization practices have traditionally followed sex-role tracking in defining appropriate behaviors, while the woman's liberation movement holds promise for modifying some obsolete barriers of role expectations and occupational opportunities. Weiner's (1974) study revealed that the subject's sex emerged as salient in a helping situation that involved possible costs of involvement and specialized skills. The influence of sex-roles interjects another dimension into the altruism research, and the sex of the potential helper is the third independent variable in the present study.

The Sex of Subject Variable

The sociobiological sex variable has evolved as an increasing research interest over the past decade of intensive prosocial investigation. Krebs' (1970) review of the literature reveals the limited amount of early studies assessing sex as a possible influence on helping behavior. The variable typically was handled in a coping-type manner, whereby members of only one sex served as subjects. The predominance of male subjects in the research attests to this approach. When Gergen et al. (1972) provided a before-and-after intercorrelational analysis to exemplify differences in results when sex was used as a moderator variable, it served to stimulate studies in which the subject sample is divided by sex. Bickman (1974) stated that the variable
is finally assuming importance in its own right, rather than being treated merely as a secondary factor that needed to be controlled.

The early studies which examined sex differences in adult subjects have had contradictory findings. Krebs (1970) reported that, in line with the studies on children, most failed to obtain significant effects (e.g. Berkowitz, Klanderman, & Harris, 1964; Blake, Rosenbaum, & Duryea, 1955; Hornstein, Fisch, & Holmes, 1968; Rosenbaum & Blake, 1955). When differences were found, some favored males while others favored females. In a series of laboratory experiments, consistent differences were obtained on low-cost-dependency-elicited helping (Schopler, 1967; Schopler & Bateson, 1965; Schopler & Matthews, 1965). More volunteer behavior was evidenced by females for an unpleasant experiment under the male solicitor's high dependency and more for males under the low dependency condition. In Schopler's (1967) final study, males helped less when their status was threatened by a highly dependent male partner. Berkowitz (1967, 1969) failed to replicate Schopler's interaction effect in three of four endeavors, and attributed the effect as most likely due to other factors unique to the Schopler setting. Berkowitz (1969) found effects that favored women but did not support the attempt to reconcile the Schopler findings. Other studies similarly reflect conflicting results. Latané
and Darley (1970) found men helped more often than women in some studies, and found no sex differences in others. Macaulay (1970) did not find differences in her field study of donating behavior, nor did Schwartz (1970a) for volunteering to be a bone marrow donor or Kazdin and Bryan (1971) when subjects either volunteered to donate blood or actually donated. On the other hand, Berkowitz (1970) now found consistent overall effects in manipulations of self-concern, and different facets applicable to men and women. For men, peer evaluation heightened self-concern for one's own self-worth and reduced helping behavior. A picture test presented as a measure of "social sensitivity," which involved correct identification of the group leader and the group attitude toward this person, produced less helping by women.

As the research increased, so did the amount of reported differences and of conflicting results. The latter appears to be a function of the heterogeneity of experimental manipulations of a single variable (such as dependency), or are due to a diversity of strategies employed (Clark, 1974; Moore, Underwood, & Rosenhan, 1973). A curious balance is seen in the reports of differences and no differences, and these effects can be systematically ordered when viewed from a perspective as suggested by more recent conceptual formulations.
Gruder and Cook (1971) suggested effects of the subject's sex on helping in terms of three possibilities: a personality effect in which the sexes differ in their helping behavior; a pure stimulus effect in which the sexes are helped differentially; or a combination of both effects. In regard to these proposed effects, the general research has demonstrated that helping behavior cannot be attributed to either a personality or a situation effect, but rather, represents an interrelation or combination of factors (e.g. Krebs, 1970; Gergen et al., 1972). Bickman proposed the possibility of an interaction effect between subject and helper in the case when both opposite-sex and same-sex dyads are used. A similarity effect may operate for like-sex dyads to help each other more, or an ingratiation effect might be in play for members of the opposite sex to help each other more. Failure to find an ingratiation effect has been reported by several researchers including Bickman (1974), while both sexes have been found to help male victims less (e.g. Harris, Liguori, & Stack, 1973; Latané, 1970). Deaux (1972) pointed to the ultimate need for situational weighting components, and suggested delineation of helping behaviors into three categories to determine those that are sex-linked: primarily masculine-oriented; primarily feminine-oriented; and equally masculine or feminine. These sex-role distinctions suggest the direction for categorizing the sex of subject variable in
relation to obtained differences reported in the altruism literature.

The general literature on sex differences provides evidence for sex-related regularities of behavior (e.g., Kagan & Moss, 1962). In nearly every society, males are characterized as active and females as more passive (e.g., Barry, Bacon, & Child, 1957; Whiting & Edwards, 1973), and in our culture, males are usually socialized to be independent and assertive while females are generally socialized to be empathic and service-oriented. Most often, sex-role perceptions and expectancies have accounted for reported differences in the altruism research.

**Sex-Role Perceptions**

Only one simple field study investigated possible environmental variations in the subject's perception of his role. Latané (1972) reported that males are more likely to pick up dropped pencils and books, and this tendency is stronger in the South than in the West or North. Wispé and Freshley (1971) obtained significant effects favoring male helpers for the same type of behavior in a "broken bag caper" of dropped grocery items in Oklahoma, while, in contrast, Schneider and Mockus (1974) reported no sex differences in helpers when only male accomplices dropped groceries rather than females. Also, Latané (1970) reported that in requests for subway fare in New York City male subjects helped more
and female requesters were given more help, while Emswiller, Deaux, and Willets (1971) found that the subject's sex made no difference in the request for a dime but that female requesters were helped less in Indiana. Emswiller et al. stated that the subjects reacted negatively to females requesting money, as the behavior is likely perceived as male-related in the conservative Indiana environment, although perhaps not in New York City. Latané (1970) attributed his effect to the greater ease with which a male can come forth with money (from his pocket), in contrast to a female who needs to locate and open her change purse within her pocketbook.

Deaux (1972) found that the greatest help was given when all factors were role-consistent, such as when a female asked another female about cooking, or conversely, a male was asked by another male about mechanics. However, role deviance on the part of the help-seeker was of greater influence than on the part of the help-giver. While no significant differences were found when males asked females about cookbooks, significant differences emerged when females asked females about mechanics books. Deaux's (1972) failure to replicate these effects, when college students served as subjects rather than the resident sample used in the initial research, indicates a lack of salient role definitions in the student culture as opposed to the clearcut ones of the
population at large. It appears that the nature of role-expectations may be changing, at least in regard to "appropriate" trivia.

**Male-Oriented Helping Situations**

The research is characterized by a predominance of male-related helping situations, and reported sex differences have favored males. These male-oriented situations typically have had built-in requirements in expectations or opportunities for helping, directed to such factors as physical strength, assertive intervention in the face of potential danger, or specialized competencies. Additionally, it is evidenced that a considerable number of the differences were obtained in interaction effects alone, which attests to the impact of situational variations (e.g. Berkowitz, 1967, 1969; Emswiller et al., 1971; Morgan, 1973; Schopler, 1967; Schopler & Bateson, 1965; Schwartz & Clausen, 1970; Staub & Baer, 1974; Thalhofer, 1971). Some researchers have not controlled for the sex variable, per se, largely because of assumed homogeneity among subjects or unfeasibility of control in the particular situation. Nevertheless, sex effects have been found as a function of a situational condition (e.g. Altman et al., 1970).

Piliavin et al.'s (1969) ingenious early field study in the New York City subways illustrates intervention of a physical nature. When a male victim collapsed, it was found
that men assisted significantly more than did women. Comments made by passive female observers were interpreted as attempts to confirm that inaction on their part was appropriate, and are exemplified by the following statements: "It's for men to help him:" or, "I wish I could help him--I'm not strong enough" (p. 295). Piliavin and Piliavin (1972) replicated the finding of significantly greater male responsiveness in a rerun of the collapse study in the subways of Philadelphia. The greater costs of helping and the increased severity of the situation reduced the helping rate overall and further increased the dominance of male helpers. In contrast to the victim's plain collapse, in one condition he oozed blood from the mouth. Staub and Baer (1974) investigated collapse behavior on the streets of Cambridge, Mass., and reported an age by sex interaction effect for just one group of subjects. Women judged to be 55 years or older helped significantly less than other females or the rest of the subjects combined in this college town.

In "stranded motorist" and related automotive studies, sex differences favoring males have also been reported (e.g. Bryan & Test, 1967; West, Whitney, & Schnedler, in press). Pomazel and Clore (1973) conducted three studies in which a motorist needed help in changing a flat tire, and they reported that almost all help offers were given by males. Deaux
(1972) found that male subjects were more likely to pick up hitchhikers in Indiana, and Campbell (1974) reported that male hitchhikers were offered rides by only six of approximately 1,533 females in Los Angeles.

Sex effects are reported in decreased helping rates for females (Borofsky, Stollak, & Messé, 1971) or increased latency of response (Levy, Lundgren, Ansell, Fink, & McGrath, 1972; Schwartz & Clausen, 1970) when other bystanders are present as potential helpers in emergency situations calling for direct intervention. In addition, Schwartz and Clausen (1970) reported that speed of helping dropped significantly further for females when another bystander was medically competent, although overall helping response was virtually the same between the sexes. Levy et al. (1972) accounted for both a main effect and a two-factor interaction by the substantially faster response of the female subject when she was alone, and pointed to the lack of any focal role responsibility for subjects in group situations as causal for the bystander effect.

In contrast to situations which require direct intervention, sex differences were not found by Latané and Darley (1970) when indirect or reportorial intervention was called for. The helper's sex did not affect reporting either a male thief in a liquor store or a male's epileptic seizure in a laboratory. When Gelfand et al. (1973) found that males reported a female shoplifter twice as often as females did (only 28% total did
so), the authors stated that men held more punitive attitudes toward shoplifting than women, due to cultural expectations. Such conflicting results serve to emphasize how the situational context and/or the type of helping behavior influences the outcome in obtaining sex effects.

Other indirect methods have been used to examine sex of the helper. Some researchers have employed the "wrong number" telephone technique, in which a caller pretends to be the victim of a car breakdown and he has no more dimes to correctly call the garage for assistance. While Gaertner and Bickman (1971) and Gaertner (1973) reported sex differences in which males helped the victim by calling the "garage" significantly more often than females, neither Simon (1971) nor Clark (1974) obtained sex differences by this technique. Deaux (1972) suggested that the nature of the helping measure, in the request for car assistance, may be perceived even by telephone as a masculine-related behavior that is negatively evaluated by female performers (randomly selected from area telephone books). However, it is likely that equivalence across manipulated conditions, as demonstrated in the latter two studies, would yield congruent results of no sex differences for this indirect measure of helping.

Ehlert, Ehlert, and Merrens (1973) conceptualized their indirect method field study as a measure of ideological affiliation, and were surprised to obtain sex differences. However, the helping response required subjects to turn off a car's
headlights, which is a direct action involving possible costs in entering a car. The researchers failed to relate these contingencies, despite the fact that so few females helped that it was statistically impossible to examine the interaction of sex and ideological affiliation. On the other hand, when Karabenick, Lerner, and Beecher (1973) investigated political affiliation at the polls on Election Day, they reported that an equal amount of help was provided by both sexes. Their measure of helping in its relationship to party identification was unconfounded by costs or other male-related factors.

**Sex Effects Favoring Females**

Among the sex-linked behavioral situations, there is a paucity of altruism literature directed to female-oriented behaviors. Adult females have been shown to help more than males most consistently in dependency situations, as exemplified by the early studies (Berkowitz, 1967, 1969; Schopler, 1967; Schopler & Bateson, 1965; Schopler & Matthews, 1965). Similar effects favoring females have been reported by Fischer (1971) for volunteering to work in mental hospitals. Also, in Thalhofer's (1971) measure of help toward a disturbed child it was revealed that while females subscribed to both responsibility and reparation norms about helping more than males, the only type of help that bore a significant relationship to the subject's sex was help relevant to
dependency. This interaction effect was interpreted as indicating that females subscribed more to a norm to help dependent others, regardless of the condition of this dependency.

Gross (1972) revealed a motivational effect in support of greater helping by females in two field studies. Subjects who discovered lost money were faced with the choice of keeping the money or returning it to an unknown beneficiary. When the subject was alone, and therefore no social sanctions were involved, 45% of the females returned the money in comparison to 23% of the males. However, when the subjects were monitored by at least one accompanying person, no sex differences were found for either honesty or helpfulness. Gross conceptualized this effect in terms of intrinsic glow or extrinsic show, in internally valued acts as opposed to instrumental acts. Support for this motivational effect has been demonstrated with child subjects (Moore, Underwood, & Rosenhan, 1973).

Reports of No Sex Differences

Sex differences most often have not been found when the behaviors were equally masculine or feminine in orientation. Gruder and Cook (1971) had subjects staple questionnaires for an unknown but dependent experimenter and reported equivalent levels of assistance by the sexes. Bickman (1974) conducted four experiments; three by telephone and the fourth
as a face-to-face situation. The subjects were asked to volunteer for an experiment in person-perception, and no sex-of-subject differences were found in this situational context for any of the four studies.

The most consistent findings in the investigations of the sex of subject variable and helping behavior have been reported for direct method field and lab studies. The characteristic pattern of results for these varying situations is the lack of sex effects. The studies consist primarily of helping, volunteering, and donating behavior in credible, everyday situations of social anonymity between helper and recipient rather than in crisis settings which involve higher costs to the helper and severity of consequences to the victim. Several researchers have contributed to the reports of no differences in addition to those mentioned previously (Bickman, 1971; Morris & Rosen, 1973; Ernest & Cooper, 1974). The most impressive findings are the repeated reports of no differences in a variety of situational contexts by Harris and her associates (Harris, 1972; Harris & Baudin, 1973; Harris & Bays, 1973; Harris & Huang, 1973b; Harris, Liguori, & Joniak, 1973; Harris, Liguori, & Stack, 1973; Harris & Meyer, 1973). In an additional lab study by Harris and Huang (1973a), multiple dependent measures of helping behavior were used in assessing manipulated effects of perceived competence. The sexes did
not differ on the two primary measures of percentage of helpers and duration of help, while males produced a greater number of items in the allotted time. An interaction effect favored males in one condition and females in the other. The results were interpreted in terms of cost orientation, in differential sensitivity between sexes. The influence of these factors in producing sex differences has been emphasized, and is substantiated again by Kazdin and Bryan's (1971) study in which the competence manipulation was unconfounded by costs, and the magnitude of helping did not differ between the sexes.

The findings for the sex of subject variable have come full circle to those of the early researchers. Situations in which cost and external threat factors were present have favored greater helping by men, while dependency and status contexts have favored female involvement. Sex effects typically have not been obtained when the situations and behaviors were not sex-linked. The personality and stimulus effects proposed by Gruder and Cook (1971) are seen in the complexity of interdependent elements that influence a person's perception and in turn, that person's helping behavior. It is toward this perceptual consideration that personality measures could act as predictors.

The final domain to be examined is that of individual difference dispositional variables, as personality correlates of
helping behavior. An individual's type of cognitive style is among this class of variables. The general construct flexibility, and its opposite rigidity, are the dimensions to be explored for their relationship to the behavioral measure of helping. Specifically, cognitive interference and cognitive complexity, as two aspects of flexibility in cognitive style, will be tested as personality components of prosocial involvement. These trait measures are operationalized as more flexible or more rigid orientations in handling stimuli. Therefore, in the composite of experimental and correlational variables selected for the present study, the fourth independent variable is Cognitive Interference (as measured by the Stroop Color and Word Test), and the fifth independent variable is Cognitive Complexity (as measured by the Barron Complexity Scale).

The Cognitive Interference and Cognitive Complexity Variables

Personality Correlates of Helping Behavior

The personality scales used to measure altruism and helping have a high validity (Robinson & Shaver, 1969), and have been shown to relate in important ways to how people behave. However, a lack of predictive power has been demonstrated for those experimental designs that sought a relationship between traditional personality measures and behavioral indices of helping. Response to a questionnaire item in the
Bickman et al. (1973) study reveals the discrepancy between attitude and behavior that has typified the research. The item dealt with the exact situation that had been staged, and only 5% of the subjects did not answer in the prosocial manner, in contrast to their rates of helping action which were as low as 58%. Similarly, Kaufman (1970) rhetorically pondered the inconsistency between sincerely professed altruistic values on direct self-report measures and behavioral responses, while Gaertner (1973) also demonstrated the incongruence of subjects' subjective impressions of self and objective prosocial action toward another.

After Gergen et al. (1972) critically assessed the shortcomings of the general research approach, these authors concluded, "Our review of the literature does support the contention that better predictions can be made of prosocial behavior if individual orientations are taken into account" (p. 124). They stressed as all important the interrelation between dispositions and situation, and indicated that this interaction of factors was required in order to develop a typology of helping with predictive power. Endler (1973) cogently proposed that the person versus the situation position assumed by researchers is a pseudo issue. Rather than asking whether behavioral variance is due to either situation (i.e. situational specificity) or to persons (i.e. traits), the more sensible and important question is, "How
do individual differences and situations interact in evoking behavior?" (p. 289). Therefore, it is necessary to identify a relevant and untested individual difference variable in the search for predictors of helping behavior. In line with Wallach and Leggett (1972), who emphasized the importance of behavioral measures and their products in relation to research strategies, the stylistic tendencies of flexible-rigid modes of helping have emerged from data. Flexible-Rigid Response Modes

Darley and Batson (1973) chose differing types of religiosity as the personality construct (i.e. religion as means, end, or quest), and reported that not a hint of statistical significance emerged in correlation between the personality measures and any form of the dependent measure. Personality variables were not useful as predictors of helping even with the assumed relevance of religiosity for the sample of student theologians. However, further analysis within the category of helping responses was afforded by the use of a scaled helping measure which assessed degree of response. Darley and Batson found a relationship contraindicated by the hypothesis, in that a type of religiosity was significantly related to the kind of helping offered the victim by those subjects who offered prolonged rather than perfunctory aid. One style of helping was directed toward the presumed underlying needs of the victim as perceived by the subject. The
other style appeared as more responsive to the victim's own comments about his needs. The researchers characterized the latter style of helping as more tentative and flexible, whereas the former style seemed to be more rigid and fixed. In the present study, dual means of implementation are suggested by the post hoc emergence of these stylistic tendencies. First, flexible and rigid action modes of behavioral response will be examined within the prolonged helping response category as an inclusive part of the dependent measure. Second, the flexible-rigid construct will be applied to the altruism domain as a trait variable in the search for interacting factors that act to induce or inhibit helping behavior.

At the level of behavioral analysis in the relationship of person to situation, flexibility-rigidity can be defined as "the degree of correspondence between specified dimensions of stimulus and response patterns" (Scott, 1966, p. 398), as appropriate to a given kind of environment or goal. In the social-learning framework set forth by Schroder and Rotter (1952), rigidity refers to a method of choice in cognitive functioning which reflects the failure to learn something. As such, this approach can be altered through experience and is not considered as an indigenous trait or an immutable disposition. Flexibility refers similarly to an information-processing approach in which the individual is prepared to expect alternative means of construing a situation.
The Barron Complexity Scale (BCS) and the Stroop Color and Word Test (Stroop) are indirect paper-and-pencil measures of cognitive factors in personality which relate to aspects of flexibility in cognitive style. The measures are orthogonal ($r=.00$), while both pertain to the individual's cognitive mode of dealing with perceptual stimuli. The Stroop principally measures interference proneness, and the high test scorer is low on this factor. The high scorer is seen to handle problems well, who tends to be cool and well-organized in crises situations, and who approaches problems and situations in a flexible manner. The BCS is a measure of the simplicity-complexity dimensions in perceptual preferences for stimuli, and the high scorer chooses stimuli which are less ordered and more complex. He is seen to have a more expansive view of the world, and flexibly approaches situations with a wider range of response alternatives than the less complex, more rigid person. The measures appear pertinent to the altruism research as they have related to social judgement and effectiveness in interpersonal functioning. Each of these measures which relate to flexibility in cognitive style, that of cognitive interference and of cognitive complexity, will be discussed in turn.

**Cognitive Interference**

Since Stroop (1935) developed the Color and Word Test, based on the work of earlier researchers (e.g. Jaensch, 1929;
Ligon, 1932), this test has undergone many revisions, modifications, and refinements. It has attracted a number of researchers because of its high validity in yielding individual differences (Jensen & Rohwer, 1966). The Stroop measures a combination of factors; personal tempo, dealing with ambiguity, and the ability to handle perceptual interference. The latter is the critical measure. The high scorer is characterized as less constricted (Hardison & Purcell, 1959), more stable (Smith & Nyman, 1962), and more field-independent (Gardner, Holzman, Klein, Linton, & Spence, 1959). From agreement among researchers, there does not appear to be sex differences in performance (e.g. Golden, 1974; Stroop, 1935). Among the myriad of studies directed to assessing individual differences by the Stroop Test, a handful of the research is directly relevant to the construct of flexibility in cognitive style as formulated in the present study.

Klein (1954) found that high scorers on the Stroop were persons more adaptive to their environment. They had a higher tolerance for ambiguity and variability, and paid more attention to contextual cues (i.e. to the environment) to guide their judgements than low scorers. Loomis and Moskowitz (1958) confirmed Klein's (1954) results, and directed their investigation to the cognitive styles of flexible control vs. constricted control. The high scoring
flexible individual was better able to integrate overlapping and/or ambiguous stimulus elements. Podell and Phillips (1959) also found that people who scored higher on the Stroop tended to be more flexible. A "lability" factor emerged for high scoring subjects within a Rorschach performance. This factor was defined as the ability to respond independently of past responses. Gamble and Kellner (1968) found a creativity component from Stroop performance. They tested a sample of creative individuals (as determined by the Remote Associates Test) and found that these subjects performed significantly higher than the noncreative group. Hochman (1971) found Stroop performance was related to field-independence, which replicated the finding obtained by Gardner et al. (1959). Hochman reported that those subjects scoring in the high range demonstrated that they were less susceptible to negative effects of stimulus competition.

It can be seen from the above studies that the Stroop has been an effective measure of factors comprising the flexible mode of cognitive style. The measure has related to tests in the categories of decision-making and those which require the subject to approach each problem independent of his past responses. Additionally, some other research with the Stroop is pertinent to the present study.

Glass and Singer (1972) chose the Stroop to repeatedly measure posttest discriminative ability in their series of
experiments on urban stress, and reported the test as an accurate measure in support of their predictions. Golden, Marsella, and Golden (in press) first examined the factor structure of the Stroop and the relationship of these factors to numerous cognitive and personality measures. Then, Golden (in press) formulated a group form of the test which was validated against an equivalent individual form on 500 subjects. The test-retest reliabilities indicated that the group and individual forms could be used almost interchangeably. This group form has expanded the feasibility of application into the helping behavior research. As an indirect measure of interpersonal orientation, the test now can be administered in a separate but integrated part of a research design that includes a subsequent experimental measure of that individual's helping behavior.

In sum, the Stroop is a measure of cognitive flexibility based on developmental differentiation and integration in cognitive structure. The person who scores highly should be able to handle more stimulus input, to integrate stimulus elements, to select salient stimuli from the environment, and to respond appropriately to complex and/or ambiguous situations. The less flexible individual should attend to the prescribed task restrictively, with all of his attention, in terms of being stimulus bound.
Cognitive Complexity

As a measure of the simplicity-complexity dimensions in perceptual-cognitive attitudes, the Barron Complexity Scale is designed to tap the individual's characteristic mode of perceiving ideas, objects, and people in his social world. Cognitive complexity is an aspect of cognition which influences interpersonal perception and social judgment in the evaluation of events. Differentiation and integration are the two components of cognitive complexity; differentiation refers to the number of available alternative ways to construe interpersonal events, while integration is the relationship among the dimensions (Harvey, Hunt, & Schroder, 1961). Researchers emphasize one or the other aspect, reasonably assuming that there is a lower limit to differentiation below which an individual cannot possess integrative complexity from a sheer lack of possible variation in judgment (MacNeil, 1974). Conversely, a high level of integrative functioning is assumed from high differentiation ability. Consistently, the simplicity-complexity dimensions have not related to I.Q. (Berkowitz, 1957; Bieri, 1955; Conklin, 1965; Crockett, 1965; Sechrest & Jackson, 1961; Wicker, 1969). The concept can be viewed analogously to Tolman's (1948) formulation of broad versus narrow cognitive maps. The less complex scorer is seen as having a narrow perspective in a highly ordered view of the world.
The BCS is a measure of cognitive differentiation. Barron (1953a) found the dimension linked to a particular lifestyle. He described the high complexity scorer as being flexible, independent, non-conforming, impulsive, and mentally quick. The low complexity scorer is viewed as being rigid, conforming, conventional, and repressive. The 50-item scale is the reduced and refined version (Barron, 1963) of the inventory-type verbal scale which Barron (1953a) constructed in collaboration with Solomon Asch as an outgrowth of the figural form (Barron-Welsh Art Scale, 1952). Barron (1963) reported an odd-even Kuder-Richardson reliability coefficient of .54 and a test-retest reliability of .74. The scale yields two orthogonal bipolar factors. The first is an acceptance-rejection factor which is the general tendency of the subject to agree or disagree with the presented statement. The second factor is a measure of the preference for stimuli representative of more simplicity and symmetry, or of more complexity and asymmetry. Most researchers have not obtained sex effects using the BCS (e.g. Bieri, Bradburn, & Galinski, 1958; Conklin, 1965; Conklin, Boersma, & Zingle, 1967), however, Norman and Fenson (1970) reported significantly higher scores for females than for males in their study, in which complexity scores were related to other measures of personality style.
Empirical heterogeneity characterizes the multimethod approach to measurement of the simplicity-complexity dimensions (Bieri, 1961). The BCS provides the stimuli for the subject's choice, unlike other measures which require the subject to generate his own constructs. The latter methods do not control for the varying elements of verbal fluency or level of the subject's knowledge, whereas the BCS provides objectively equivalent stimulus conditions for the inquiry into how individuals differ in responses to the same range of variation. The assumption that complexity theory refers only to cognitive structure while it is independent of content is questioned (Scott, 1969). Preferably, the simplicity-complexity dimensions are viewed as variations in degree rather than as the use of different dimensions or different rules. As such, the BCS incorporates a wide range of perceptual stimuli choices, and it is measured along a continuum of a more or less response mode in line with the dominant preferential tendency of that person. As Kelly (1955) stated, and Scott (1962) substantiated, a dichotomous judgment is basic to any more refined discrimination. Bieri (1961) referred to Barron's orientation of detecting an individual's response tendency as a "fruitful approach" (p. 372).

Studies aligned to the present research are reported in the literature. Barron (1953b) hypothesized that independence of judgment would correlate positively with the BCS
measure of cognitive complexity. The behavioral index was the Asch (1951) group situation of social pressure, in which a decisional conflict is produced when a stooge confronts the subject with information that belies perception. Barron classed the two types of respondents as Independents and Yielders. The results showed that Independents preferred complexity, placed higher values on close interpersonal relationships and on the individual as opposed to the group, while Yielders preferred simplicity, tended to be more practical-minded and somewhat more physicalistic in their thinking, and were group-oriented. Bieri, Bradburn, and Galinsky (1958) provided further experimental support for the relation between the independence of judgment configuration of traits and the preference for complexity as measured by the BCS.

Barron (1953a) reported the complexity dimension as a positive correlate of flexibility in thought processes when he obtained a significant inverse correlation of the dimension with rigidity. He theoretically related complexity to expansiveness in interaction with the environment (as opposed to constriction). Barron characterized the complex person as one who may have had early experience in environmental mastery, combined with complex developmental stimuli. This hypothesis was experimentally developed into a measure of the complexity of developmental stimuli afforded by family background. Sechrest and Jackson (1961) conducted a detailed investigation of cognitive
complexity as a measure of social intelligence (i.e. social effectiveness). Although social intelligence correlated positively with all four measures administered to assess different facets of the simplicity-complexity dimensions, the two significant correlations were obtained from the Barron-Welsh Art Scale and the family background measure. Sechrest and Jackson stated in conclusion: "We believe that the correlation of .27 with complexity of stimuli afforded by family background is of especial importance because that complexity measure might have causal implications. Presumably a variety of background experiences, some of which . . . . may not be inherently desirable per se, contribute to greater reputation for social effectiveness" (p. 180). Sechrest and Jackson (1961) have related cognitive complexity both to the Barron Scale and to the stimuli afforded by residence in the socialization years.

Berkowitz (1957) reported a significant relationship for leveling tendencies and complexity, as measured by a modified version of the BCS. Levelers tend to forget many of the details comprising their experiences, which represents a lack in the individual's capacity to retain and cope with phenomenal complexity. Like Yielders, levelers prefer simple phenomenal worlds. As a secondary consideration, Berkowitz related ethnocentrism scale scores to the BCS, and found that the Low Complex scorer tended to see the world as
black/bad or white/good. He ascribed to the less complex scorer the return to simple phenomenal worlds as achieved by eliminating and minimizing complex experience, while Barron (1952, 1953b) described the return to order as a process of exclusion of phenomena, which results in equilibrium for the less complex.

On the basis of 27 subjects' performance, Moyles, Tuddenham, and Block (1965) announced their ability to extract 24(6%) stimulus items from the enlarged 400-item Barron-Welsh Art Scale (1952) that were independent factors rather than the fused dimensions of simplicity-symmetry and complexity-asymmetry that were conceptualized in the scale's construction. These combined dimensions also had been identified as closely resembling Eysenck's (1941) polar K factor. Moyles et al. finally assessed that neither was there much difference between simplicity-complexity and symmetry-asymmetry as determinants of stimulus preference, nor were the distinctions important to the subjects. The researchers stated in conclusion that their findings were inconclusive, and that "these results do not bear on the legitimacy of extending the stimulus variable into the intra-psychic domain" (p. 689), but regretfully, the article served to eliminate comparative evaluation of any form of the scale by a productive researcher (Streufert, 1970). However, Norman and Fenson (1970) countered the Moyles et al. (1965)
criticism. From results grounded in empirical data, they argued that the psychological simplicity or complexity of subjects could be inferred on the basis of their scores. These investigators asserted that personality style "is reflected in the Barron-Welsh preferences" (p. 138). Conklin and his associates have relied on the BCS in a series of studies in the exploration for psychological correlates of cognitive complexity. Conklin (1965) related underachievement to cognitive complexity, and found a higher degree of flexibility among these subjects as opposed to overachieving high school students of both sexes. Conklin et al. (1967) used the BCS as an indicator of success in two learning situations. They unexpectedly found that the less complex scorer performed in a superior manner in this type of task. The results were attributed to the more rigid and conforming cognitive structure of the less complex scorer, who is seen to retain structured factual types of material more easily and therefore to perform more efficiently. Altman and Conklin (1972) reported a significant negative correlation of complexity with increased age and a significant positive correlation with perceptual and attentional skills among college student subjects. The authors suggested that a clearer cognition may exist for more complex scorers in keener and more discriminative perception, and referred to Barron's (1953a) postulate that the more complex person is
more observant and perceptive, and views things both usually and unusually.

The literature review is concluded with the above studies directed to the last of the independent variables, cognitive complexity, as measured by the Barron Complexity Scale. It was shown that the cluster of described traits (Barron, 1953a, 1963) which revolve around a flexible mode of functioning for the more complex person is supported by the empirical results. The simplicity-complexity dimensions relate to the nature of social perception and effectiveness in the structuring of stimuli. These stimuli choices are seen to be attuned to the subject's orientation toward experience. These modes of response presumably have been "shaped" over time into a relatively stable range of patterns, and as such may be useful as a predictor of the manner in which the individual deals with the environment as determined by his experiences during the developmental years. Vannoy (1965) referred to the complexity concept in general and stated: "Since different tendencies ought to have different behavioral consequences, observation of differences between the behaviors of persons who differ in their responses to test instruments would increase our understanding of this aspect of cognitive processes" (p. 395).
Purpose of This Study

In the present research, the experimental focus is directed toward the identification of antecedent factors that could influence prosocial involvement as well as the situational conditions that act to induce or inhibit helping responses. Specifically, this study is designed to examine the combination of independent variables chosen from each of the domains of demographic attributes (residence) and social roles (sex), situational determinants (overload), and individual difference dispositional traits (cognitive interference and cognitive complexity). The multiple experimental variables are to be assessed by the dependent measures of absolute and relative levels and patterns of helping. The behavioral measure of helping subsequently will be correlated to the subject's performance on the dispositional measures designative of aspects of the construct flexibility in cognitive style. In response to the emphasis of researchers (e.g. Gergen et al., 1972; Krebs, 1970) and the lack of empirical evidence, this study is an attempt at a comprehensive and controlled investigation of rural-urban environments.

Quantifying the Residence Variable

First, it is necessary to give substantive form to the residence variable by quantifying it. Two considerations in establishing criteria are: control for factors such as the subject's age, income, and educational level;
and relative equivalence of background lifestyles. The first aspect is achieved by conducting a laboratory experiment in which the sample is drawn from a college student population. The second is attained by operationally defining three levels of the residence factor based on both statistics and characteristics pertaining to the size and location of the community in which the subject grew up.

The most pertinent consideration in delineating the rural pole is the nature of the population settlement, in terms of numbers of people, patterns of density, nearness to a central city, and opportunities for occupational diversity. Wirth (1956) dichotomized the rural mode of life into farm and nonfarm. The rural nonfarm way of life affords more relevant comparisons to the urban mode. Wirth also suggested that it might well be necessary to ignore the statistically defined categories of rural (2499 or less population) and urban (2500 or more population) in order to examine how numbers, density, and heterogeneity affect the relations among men. Therefore, the rural criteria are as follows: (a) the communities are to be self-contained rural towns, and farming as the family occupation is excluded; (b) community size is established at less than 10,000 population, and all small towns located within commuter distance to a central city are excluded. Examples of rural communities which meet the criteria are Lihue, Kauai, Hawaii (population 7,000, density
53 persons per square mile); Inman, Kansas; and Palatka, Florida.

In contrast to the rural mode, the urban pole refers to representative U.S. central cities (i.e. the physical city). The criteria are in line with the characteristics of the modern metropolis as defined by Blumenfeld (1965) and recent statistics (Census of Population, 1972; New York Times Encyclopedic Almanac, 1970). Blumenfeld distinguished the critical mass that constitutes the evolution of the modern metropolis (500,000 or more people) from the traditional nuclear city (50,000 population) and from the megalopolis (e.g. New York City, population 12,000,000, Manhattan density 70,000 persons per square mile). It is revealed by census figures that practically all of our metropolitan growth since 1960 has been in the metropolitan areas that ring our cities. Although the population increase directly in the city centers has only been one percent, the overall metropolitan growth is reported at 25 percent. Therefore, the urban criteria are as follows: (a) area size is established as a population concentration of 500,000 or more people, and includes those for whom travelling time from urbanized ring to city center is less than 40 minutes (e.g. Cambridge/Boston, Mass.); (b) excluded are towns of population less than 25,000 which are small but urban, as well as the boroughs that comprise the megalopolis of New York City.
Regional examples of representative urban cities are: in the East, Baltimore (population 915,000, density 12,000) and Philadelphia (population 2,000,000, density 15,000); in the Midwest, Cleveland (population 770,000, density 10,000) and Chicago (population 3,500,000, density 15,000); and in the West, San Francisco (population 725,000, density 15,000) and Los Angeles (population 2,800,000, density 6100).

A third level of residence included in this study is represented by Honolulu (population 325,000; State of Hawaii Data Book, 1972). As a densely populated cosmopolitan city in proportion to land area (3850 persons per square mile), and the fact that the density factor consistently has correlated with antisocial acts, the experience of living in Honolulu is characterized by the urban mode. Inasmuch as it is insular and isolated geographically from other metropolitan centers by 2500 miles of ocean, these features relate Honolulu to aspects of the rural mode. Honolulu will be categorized as the second level of urban residence, and its inclusion represents an exploration of the dominant qualities in the prosocial responsiveness of its inhabitants.

**Summary and Hypotheses**

Although population characteristics may act to condition behavior in ways that result in social problems such as the failure to intervene (Latané & Darley, 1970, Milgram, 1970), the ways of influence are unclear. However, some major
implications are to be derived from the literature. These are: (a) social involvement by an individual toward an unknown other in situations of need does not adhere to the stereotype of the detached urbanite; (b) exposure to overload and subsequent adaptations lead to the inhibition of socially responsible action; (c) sex effects are primarily accountable for by sex-linked behaviors and situations; (d) measures directed to the flexibility-rigidity construct in stylistic tendencies relate reliably to social judgment and effectiveness of interpersonal functioning.

It is indicated by the summary of effects that there is substantial empirical evidence for making predictions that exposure to situational overload (Milgram, 1970) should negatively affect helping behavior, as well as expecting that no sex differences should be obtained in a situation of the victim's high dependency, low costs to the helper (Schwartz, 1970b), and behavior not directed to gender (Deaux, 1972). Moreover, although the general construct flexibility and the particular aspects and measures of cognitive interference (Stroop) and cognitive complexity (BCS) are untested in the altruism domain, the heuristic value provided by theory (Darley & Batson, 1973) and the positive results of relevant experimentation (e.g. Sechrest & Jackson, 1961) lead to expectations of a relationship. However, there is not an adequate empirical basis for making untempered predictions
which would favor significantly increased helping behavior for rural reared persons as compared to those who grew up in urban centers. It is implied in the literature that rural residents would help more (Latané & Darley, 1970; Milgram, 1970; Wirth, 1938, 1956), but true rural-urban differences have been empirically tested only by Schneider and Mockus (1974), who failed to find a difference. However, there is some support for growing up in a small community as a positive influence on altruism (Darley & Latané, 1968; Friedrichs, 1960; Gelfand et al., 1973), although higher rates of helping consistently have been reported for urban centers in comparison to New York City (Clark & Word, 1972; Franklin, 1973; Merrens, 1973; Morgan, 1973), and urban level of helpfulness was found to be high (McKenna & Morgenthau, 1970). The research on the residence variable gives rise to questions that relate the person to the situation in regard to the social characteristics of rural and urban experience. It is hoped that this study will answer the following:

Does the demographic circumstance of rural-urban rearing differentially condition the individual's spontaneous social responsiveness to a stranger in need in a standard setting and controlled situation?

Are there identifiable background factors as antecedents of social responsiveness for prosocial actions?
It is hypothesized that there should be no difference in the pattern of helping effects for residence groups, but a greater social responsiveness overall (i.e. intensity of effects) could be expected in both the magnitude of helping (more involvement) and response frequency (less social inhibition) for those subjects whose background experiences have been in rural environments.

It is also hypothesized that helping behavior will vary as a function of situationally induced stimulus overload. The exposure to overload should serve to inhibit the number of helpers and magnitude of helping across residence groups. An increase in helping should be demonstrated by subjects who are not overloaded.

It is further hypothesized that sex differences should not be obtained, on the basis of situational controls and the equally masculine and feminine behavior involved.

It is finally hypothesized that, while the personality measures are untested in this domain, either or both may act as predictors of helping.
CHAPTER III

METHOD

Subjects

Initially, 198 experimentally naive undergraduate students enrolled in introductory psychology and sociology courses at the University of Hawaii were administered the personality measures and the background information questionnaire. Of these potential subjects, 67 females and 66 males who met the residence criteria participated in the experimental session. These subjects were divided into residence groups on the basis of the community size and location in which they grew up from early childhood (three years old) until 16 years of age. The three groups were classed as Honolulu Urban, Mainland Urban, and Rural. The subjects were randomly assigned by Sex and Residence to two manipulation conditions, in which they were either overloaded (High OL) or not overloaded (Low OL). Seven subjects' data were discarded from the analysis—one for equipment malfunction, two for experimental contamination (i.e. saw the confederate when they came in early), and four for suspicion of the experimental purpose—leaving a total 126 subjects comparably distributed within and across treatment conditions. Each participant in the questionnaire session received a bonus point for course credit, and each subject was paid $2.00 for the experimental session.
The subjects were drawn from the Manoa campus and the Kauai Community College branch campus of the university. The planned intent to secure the rural group subjects from the outer island campus was altered by the varied backgrounds revealed by these students on the information form. Therefore, students from both locations are randomly represented within each of the three residence groups. The environmental locales in the backgrounds of the sample is as follows: the Rural group subjects grew up in the states of Hawaii, Alaska, Florida, Pennsylvania, New Mexico, Wyoming, Oklahoma, South Dakota, Idaho, and Kansas. The average population of the rural areas is 4000 people, while maximum population densities are under 200 persons per square mile. The Mainland Urban subjects included residents from the major regions of the United States, who represented the states of New York, New Jersey, Massachusetts, Pennsylvania, Florida, Ohio, Illinois, Michigan, Missouri, Minnesota, Louisiana, Washington, and California. The mean population of the urban cities from which they came is 1.5 million, with the mode at 700,000. The mean population density is 12,400 persons per square mile. The Honolulu group grew up in an urban center where the population within city limits is estimated at 325,000 persons, while for the Honolulu Standard Metropolitan Statistical Area it is 629,000 people. The city's population density is 3850 persons per square mile, while the SMSA density is over 1100
residents per square mile and the state average is 127 persons per square mile.

The American born subjects were of multiethnic national origins. The Rural and Honolulu group's composition was comparable, in which the majority of subjects were of Japanese ancestry, while for the Mainland Urban group Anglo-American subjects were predominant. The latter were highly underrepresented in the Honolulu group, while proportionately represented among the Rural group members. The mean age of the subjects was 19.99 years, with a range of 17.00 to 39.00 years, and 91% of the subjects were under age 25. The sample was homogeneous across residence groups on parents' educational level and socioeconomic status. As determined by the father's occupation, 56% of the total sample was classed as bureaucratic middle class, 21% as entrepreneurial middle class, and 23% as working class.

The final subject by variable breakdown was as follows:
Residence; Honolulu N = 41, Mainland N = 42, Rural N = 43.
Overload; High N = 63, Low N = 63.
Sex; Female N = 64, Male N = 62.

Materials

Printed. Printed materials were used in each of the two parts of the study to provide written instructions and for paper-and-pencil response measures. The materials were prepared in packet form and presented to each subject at the
start of the session. A cover page supplied brief information about the nature of the study and general instructions applicable to the particular session.

The contents for the questionnaire session were the dispositional measures of cognitive interference (Stroop Color and Word Test) and cognitive complexity (Barron Complexity Scale), and the Background Information form. The two page personal history form was designed as simply as possible in an attempt to avoid ambiguous or irrelevant responses. It was patterned after a similar questionnaire constructed by Weiner (1974) to tap personal attributes and experiences of the subject which might act to influence prosocial involvement. The questions usually required one word answers or a check mark response (see Appendix A).

The format for the three pages of the Stroop is identical; each page consists of five columns of 20 items. On the first page the words Red, Green, and Blue are printed in capital letters in black ink on a white ground. On the second page the words are replaced by xxxx, printed in one of the three colors red, green, and blue. On the third page, the words on the first page are written in the ink colors on the second page (e.g. word red printed in blue ink). The ink color is to be attended to rather than the word on this page, which is the crucial measure. The item positions are alternated within pages and changed between pages, no color follows
itself, and no color-word is matched. The score for each page is obtained simply by counting the number of items read on that page, which is expected to decrease sequentially. An overall score for the three stimulus variations is computed by substituting the obtained values into the weighted formula devised by Golden (in press).

The 50-statement Barron Complexity Scale is designed in the forced-choice format. The subject is instructed to circle either True or False, in agreeing or disagreeing with the item, in line with that individual's dominant tendency in perceptual preference for more or less complex stimuli. The person defined as more complex prefers the stimuli qualities which are asymmetrical, aesthetic, tentative, and non-traditional in contrast to the less complex person whose choices represent preferences for balance, order, structure, and tradition. The scale is scored on a continuum from one to 50 in the direction of complexity. It is assumed that the higher the score, the more differentiation in the simplicity-complexity dimensions of cognitive thought exists for that person.

For the experimental session, two packets were prepared for the overload manipulation. The packets were coordinated in appearance, and cursorily appeared to be the same. The introductory page (i.e. General Information and Instructions) and the Post-Experimental questionnaire were uniform for all
subjects. The materials were also identical in format. Each had five pages, were matched in seriation, had internal consistency in numbering of specific instructions, and in presentation of the sample visual aids. The materials differed in the complexity of content, amount of verbiage, spacing between lines and transition sections, and in the demands of the experimental tasks.

**Stimuli.** In both manipulated conditions in the experimental session, overloaded (High OL) and nonoverloaded (Low OL), the subject was instructed to attend to visual and auditory stimuli. The visual stimuli were pattern forms adapted from Raven's (1956a, 1956b) sets of progressive matrices. The matrices consist of a series of colored and black-and-white geometric designs, with each design containing a missing part. Design patterns were selected from the range of matrices and developed into a consecutively numbered slide series. For the missing part in the design, there is a corresponding set of six alternative pattern pieces, one of which correctly fits the blank space to appropriately complete the whole design. Each set of these alternative patterns was numbered to correspond with its slide mate and was laminated into separate rectangular cards. After viewing, the subject deposited the card into a nearby container provided for that purpose.
For the auditory stimulus, two tapes were made, by the experimenter, of a series of varying 3-digit numbers selected from random number lists. The number six was incorporated among any (one or more) of the three digits at specific, patterned intervals. This patterning sequence, and the four second interval between presentation of each number was invariant. The tapes differed in respect to the amount of numbers presented under each Overload condition.

**Equipment.** The equipment used to view the slides was a GAF Anscorama model 980 automatic timer slide projector with a zoom lens and automatic focus, and a portable screen (affixed to the wall directly in line with the subjects' forward vision). The tapes were played on a battery or electrically operated Panasonic model RQ420S autostop cassette tape recorder.

**Miscellaneous.** Additional objects were used to further simulate the ambiance of a hectic environment implicit in the concept of overload. The subject was seated at a large table which was filled with contrived clutter under the High OL treatment, while the area was sparse and devoid of unessentials for subjects under Low OL. The clutter consisted of papers and catalogs piled high, an array of scattered gadgets such as a ruler, scissors, and stapler, and assorted sundries representative of disorganization strewn about.
Questionnaire Session

Procedure

The first part of the study was conducted in a series of group sessions which averaged 30 subjects per group. Each was held in a moderately-sized classroom and was approximately of 30 minutes duration. The research was ostensibly to investigate aspects of individual differences between the sexes. The deception was carefully considered and deemed necessary in order to obtain a spontaneous measure of helping behavior. This questionnaire session was the information-gathering phase of the study, and supplied the basis for the subject's assignment to levels of the Residence and Sex Factors.

The Stroop, as a timed measure, was administered by the experimenter, who read the directions aloud while the subjects followed the printed materials. The subjects were instructed to form the word or item color subvocally to themselves, and in this manner silently read as many items as possible within the allotted time, starting at the top of each column and reading down. The starting signal was the word "Begin," and at 45 seconds from that time the experimenter said "Stop." The subjects then were instructed to circle the last item read and to preface the circle by the number 1 in the case where all the items had been read once and were started again.

When the Stroop testing was completed, the subjects were told to continue with the Background Information questionnaire
and the Barron Complexity Scale. The verbatim instructions were as follows:

Please proceed at your own pace until you have completed both sets of the remaining material. Please check your pages to be sure that you have answered all the questions. If any item is unclear, raise your hand and I will assist you.

When you have finished, bring your papers to me at the front desk and record your name and class section for the bonus point on the sheet provided. Also, please sign up for the second session on the yellow sheets specified for that purpose. Then you are free to leave. Please turn to the next page now and start.

When finished, the subject individually brought the packet to the front desk and the reported residence background was unobtrusively checked. The qualified subject was directed to self-select an appointment from the days and times indicated on the sign-up sheets. The unqualified subject was asked to note on a separate sheet (headed "Scheduling to be Arranged") when an appointment would be convenient. For these latter subjects, the experimenter stated that those particular days or times indicated were already filled in the limited scheduling offered, but the subject would be contacted by phone for future scheduling.
Each of these unqualified participants was personally called by the experimenter, thanked for volunteering, and told that a specified residence requirement precluded further participation. The qualified subjects were informed that they would be contacted prior to the second session to confirm their appointments. All subjects were thanked for their cooperation. The above procedures were followed to prevent the importance of the Residence variable from becoming a focal point, and eliminated the need for double phone calls to schedule and confirm appointments for qualified subjects. In addition, the self-selection procedure served as a control for inadvertent experimenter bias (Rosenthal, 1963) which could be operative in random assignment of subjects to manipulation conditions on the basis of preselected variables. As a further control, the cognitive interference (Stroop) and cognitive complexity (BCS) measures were set aside, and computation was performed after the experimental session was held.

Experimental Session

Procedure

In the experimental session, all subjects were exposed to a simulated environment, in which the ambiance either represented an urban surround (High OL) or a rural atmosphere (Low OL). The effects of the manipulated exposure to stimuli would be tested by each subject's response to the contrived emergency situation which was to occur.
The physical setting for the session was comprised of three separate areas located within a 50-foot radius. The experimenter was presumably working in one, the confederate was keeping out of sight in another, and the subject was performing the experimental tasks in the third. The large experimental room was rectangular in shape and approximately 14 by 18 feet. The room was strikingly similar in layout as well as size in both Manoa and Kauai, and the two settings overall were highly comparable. The experimenter was extended the courtesy of preempting personal offices in the latter location in order to maintain standardization. On the Manoa campus, the session was run over a two-and-a-half-week time period, while this individual subject session was conducted intensively over four successive days in Kauai.

The subject reported for the 35-minute session to the temporary quarters occupied by the experimenter, and was then taken to the experimental room which was described as more spacious and therefore easier to view the slides that would be shown. The experimental room was set up as a shared office in Manoa (the experimenter stated that she shared the office with a Tom Selden), while it was an office in Kauai (that a Jim MacFarland shared with others). A chair, some books, and a wastebasket were intentionally set up near the entrance as props for the emergency situation. The subject was directed to be seated at the table on which the equipment and materials
were placed. As previously described, this area superficially differed in the sparseness which nonoverloaded subjects encountered as opposed to the clutter with which overloaded subjects were surrounded. One or the other overload conditions was presented on a preset counterbalanced schedule.

Each subject was instructed to read the uniform introductory page of the packet, which told that the experimental purpose was to examine sex differences in coordination among modalities. Then, as pertinent to the overload condition, the experimenter read the specific instructions aloud while the subject followed the printed materials (see Appendix B for verbatim instructions presented under each overload condition).

Tasks and overload treatment. The essence of the three tasks required of all subjects was as follows: (a) the subject was to view the slides projected on the screen while matching the missing part of the design from the cards placed in front of him/her; (b) the subject was to listen to the series of 3-digit numbers emanated from the tape recorder and attend to each set which contained the number six in any of the three digits; (c) the subject was to record the answers from each set of stimuli in the designated spaces on the answer sheet.

The experimental demands diverged for the overload manipulation early in the task descriptions. Overload was
operationalized as sensory bombardment of stimuli, and the differential demands of the tasks were created to combine experimental and mundane realism as set forth by Aronson and Carlsmith (1968) by simulating environmental pace and tone within the confines of the laboratory. The High OL subjects were given simultaneous tasks and multifocus demands. They were exposed to competing sets of the visual and auditory stimuli which required their simultaneous attention. At the same time, they were instructed to record both the correct pattern number for the matrices designs and the digit sets which contained a number six. The recordings were to be positioned in the specified lines within the column grids on the answer sheet. The answer sheet in and of itself presented a more complex stimulus pattern than did the one for the nonoverloaded (Low OL) condition (see Appendix C for answer sheets). In addition, the amount of visual and auditory stimulus items for the overloaded subjects (High OL) far exceeded that for nonoverloaded subjects. Moreover, the speed of the visual presentation differed greatly between the two conditions. For subjects who were overloaded (High OL), the slides automatically advanced every 5.5 seconds, for exposure to a total number of 49 different slides and matching cards. During this time, the overloaded subjects also heard 49 sets of 3-digit numbers, of which 23 sets contained the critical six in varying digits. It took a five-minute-
and-forty-three-second time period for the High OL subjects to view and hear the 49 items of each stimulus.

The time for the stimuli presentation was held constant between conditions. Therefore, the procedure for the Low OL condition was coordinated with the above stated time span. The nonoverloaded subjects (Low OL) were instructed to listen to the tape after they had viewed the slides. The answers were recorded in conjunction with each separate visual or auditory stimulus item. The subjects in Low OL viewed a total of 14 slides (and one of these was a repeat of the printed sample) at 11.5 seconds viewing time intervals. The matrices presented to the overloaded subjects ranged from very easy to very difficult, and for the nonoverloaded subjects the stimulus items were alternated between very easy and intermediate difficulty. This procedure was adopted for sustaining attention and minimizing suspicion. The matrices presentation for the nonoverloaded subjects was automatically followed by 15 blank slides projected on the screen, which coordinated with the time the Low OL group listened to the tape. The Low OL condition subjects heard 14 number sets, which contained six critical ones to record. Thus, the nonoverloaded subjects were exposed to less than 29% of the visual stimulus items with which the overloaded subjects were confronted, and were to record only 26% of the number sets required of those in High OL. Subjects in pretesting
confirmed the experimental intent that the Low OL condition represented a leisurely atmosphere while the High OL condition bombarded the subject with ongoing, competing stimulation.

Regardless of condition, the subjects were told that when all the slides had been shown and all the numbers had been spoken, the word RETRIAL would be presented as a cue supplying that information. It was explained that no novel items would be presented after that cue. Following the word RETRIAL there would be an automatic repeat of the stimuli items as an opportunity to correct for accuracy or to pay attention to stimuli missed. When finished, the subject was to rate the difficulty level judged for each stimulus set and the combination of tasks on the Post-Experimental questionnaire which directly followed the answer sheet. The last question on this measure was to validate the experimental hypothesis in view of the helping behavior deception which was to occur during the retrial (see Appendix D for the Post-Experimental questionnaire).

As part of the instructions, some informational points were emphasized. First, the subject was told that the transitional sequence in the execution of the experimental tasks would be reiterated on slides or tape, so that the subject would not be taxed with remembering these instructions. For example, when the slides and numbers were completed for the second time, a slide appeared which read: Now proceed to
answer Post-Experimental questionnaire. This procedure was instituted to avoid the possibility of confounding sensory tasks with learning tasks. Second, the subject was shown how to operate both machines, which was practiced, and all subjects were asked to turn on the recorder at the start of this task and to turn off the projector at the finish of that task. Both machines had uncomplicated single mechanisms which did not require any mechanical or technical skill or knowledge to turn on or off. Large white strips of tape with black arrows indicating placement and direction of the switches were pasted on each machine. The subject was also told that the recorder could be left to run as the tape would be noiseless when the numbers ceased. Third, the experimenter stated that she would be working in the room where the subject had arrived for the session, and would return to the experimental room for discussion and collection of the materials in about 15 minutes. These last two points were options imparted in order to augment the subject's perceived control of the experimental environment. Each could provide the opportunity for a wider range of response alternatives in handling the imminently staged emergency situation. For example, the subject who might be unsure of directly handling an accident was supplied with an explicit indirect, reportorial method. Also, perceived control has been shown to act positively to reduce stress aroused when a subject is faced
with an unpredictable stimulus, as represented by the "victim" (Glass & Singer, 1972), and to mitigate the effects of stimulus overload (Sherrod & Downs, 1974).

When the subject indicated readiness to begin, the experimenter turned on the projector, focused the first slide, and then set the automatic timer just before leaving the room. A sufficient lapse of time was provided during this procedure for the subject to enter the identifying information requested on the answer sheet, and to record the first answer to the visual stimuli as concrete evidence that the task was undertaken correctly.

The dependent measures. Helping behavior was assessed by dual dependent measures for both quantitative and qualitative analysis. The primary measure was a quantified scale formulated to assess magnitude and type of response. The second dependent measure was the frequency of response in absolute terms of dichotomized categories of either Help or No Help.

The 6-point scaled measure ranged from zero through five. In addition, the prolonged helping category, number 5, was expanded to include three forms, or modes of responding. These response forms were conceptualized as relating to the personality construct flexibility, providing an empirical assessment within the helping domain across behavior. It was reasoned that the mode a subject spontaneously employs
when offering a prolonged helping response is likely to reflect the manner in which that individual deals with his environment across a variety of situations. The expectation follows that the subject who chooses to provide the highest magnitude of help is consistent in the mode as well as type of flexible response. The scaled measure was formulated as follows:

0 = subject did not offer help of any kind.
1 = subject remained in seat and verbally communicated with victim, asked questions such as, "Are you hurt?", "Are you okay?" but did not offer help.
2 = subject sought indirect help for the victim, such as going for the experimenter.
3 = subject went over to the victim directly to see if she was all right (and may have helped her to the chair).
4 = subject went over to the victim directly and then sought other help (as in category 2).
5 = subject offered prolonged help to the victim directly.

a = stayed with victim, expressed concern, and/or helped victim from latter's initiated action = flexible passive form

b = initiated helping action by suggesting to victim what he/she could do to help = flexible active form

c = told victim proper treatment for presumed injury (i.e. what should be done to help) = rigid form
The Help vs. No Help dichotomous dependent measure, in its relation to the scaled response measure, was formulated as follows: Scaled responses 0 and 1 represent No Help, while responses 2, 3, 4, 5 constitute Help.

Prior to conducting the experimental session, the 6-point scaled measure, excluding the three response forms within category 5, and accompanied by a brief description of the emergency incident, was submitted in written form to a panel of 10 faculty members who were asked to rank order the scrambled and unnumbered categories. Eight judges were in full agreement with the rankings as formulated, while two ranked the prolonged help category lower than responses conceived as relatively superficial help. Interjudge agreement was .94 among the categories. Therefore, the rating scale was retained as formulated, supported in the literature by a comparable ranking used by Harris and Huang (1973b).

Pertinent to the Help vs. No Help dichotomized measure, methodological discrepancies are found in the literature. Some researchers have classified the subject who reacts to the victim (e.g. verbal communication) but does not offer helping action in the No Help category (Clark & Word, 1972; Harris & Huang, 1973b; Tilker, 1970; Wispe & Freshley, 1971), while others have classed reacting subjects within the Help category (Darley & Batson, 1973; Latané & Rodin, 1969; Schneider, 1973; Yakimovich & Saltz, 1971). This inconsistency
can partially explain the conflicting results in the proportion of subjects reported as helpers. In some instances, inclusion of reacting subjects has shifted the reported level of helping behavior from an intermediate to a high level, or the intermediate level (most commonly reported in the literature) would be further lessened if reacting subjects were not included. Among the three general classes of response measured in the present study, namely ignore, react, and act, helping actions delineate the dichotomy for the category Help.

Characteristics of the emergency. The incident itself was classed as semiserious in nature, as the consequences involved the physical well-being of another person while not being severe. The costs to the subject were low, as there was no physical danger, little time and effort were involved, and no special competence or physical strength was required. However, as the sole observer and potential helper, the subject's responsibility was high. Some relevant situational factors known to increase or decrease the probability of helping behavior were considered and controlled accordingly. These were: eye contact between subject and victim (Darley & Batson, 1973; Ernest & Cooper, 1974; Wispé & Freshley, 1971), proximity of victim to subject (Ernest & Cooper, 1974; Milgram, 1965), victim falling in the observer's path (Schneider, 1973; Staub & Baer, 1974), victim feedback/ambiguity (Clark & Word, 1972, 1974; Darley, Teger, & Lewis,
interaction pattern between victim and subject (Harris & Huang, 1973b), reaction time period (Harris & Huang, 1973a, 1973b; Latané & Rodin, 1969; Tilker, 1970), unsolicited vs. requested help (Schneider & Mockus, 1974; Yakimovich & Saltz, 1971, respectively). For example, when a victim falls directly in front of a lone observer, and/or looks at the subject directly, and/or asks for help, these conditions of confrontation increase the likelihood that the subject will help, but decrease the probability that the action is altruistic or intrinsically motivated.

The confederate was a 31-year-old small-framed, average-looking female of Anglo-American origin. She was dressed in the campus style of slacks and overshirt, and fastened her long hair into a ponytail. She wore a watch with a second hand in order to time her entry and exit in the enactment of her role. She was versed and rehearsed in her performance only, and was blind to the experimental purpose and the independent variables. She was given a time schedule for the day, on which she recorded the subject's response (category number) and any verbal exchange and/or description of helping action. This record was subsequently corroborated with the subject's report to the experimenter during the post-experimental discussion period. The confederate was chosen (and her role was designed) to minimize effects due to stimulus person characteristics in relation to the subject.
She was not a peer of the average age student subject nor fashionably groomed so as to possibly bias helping (Bickman, 1974; Deaux, 1972; Harris & Bays, 1973). She was neither obese nor infirm so as to arouse sympathy, antipathy, or excess dependency (Harris & Huang, 1973b, Schneider, 1973). A female was chosen as it has been found that male victims are helped less (Clark, 1974; Gruder & Cook, 1971; Harris, Liguori, & Joniak, 1973; Latané, 1970; Pomazel & Clore, 1973), and slower (West, Whitney, & Schnedler, in press), especially by females (Piliavin & Piliavin, 1972; Piliavin, Rodin, & Piliavin, 1969; Schwartz & Clausen, 1970), or that the victim's sex did not make a difference with subjects of both sexes (Bickman, 1971, 1974; Karabenick, Lerner, & Beecher, 1973). Since Hawaii's population is ethnically diverse and has no majority group, and the subjects were born and reared in the American core culture, using one victim throughout was considered a more valid and practical measure than attempting ethnic equivalence between victim and subject (Deaux, 1972). Also, as previously cited, studies of discriminative helping have provided support for cross-racial helping.

The emergency incident. The episode occurred midway in the retrial sequence, when all the subjects were being exposed to the stimuli items for the second time. In this way, stimulus continuity was maintained for credibility,
while a control was instituted for the artifact of evaluation apprehension most highly present for the initial presentation of a task in a laboratory situation (Rosenberg, 1965, 1969).

Thirty seconds after the experimenter left the subject, shutting the door of the room behind her, the confederate was given a hand signal which indicated that her performance was to begin six minutes later. When this time had elapsed, the victim knocked on the door of the experimental room, and as she opened it she loudly called, "Tom -- Tom, are you here ("Jim" was called in Kauai)?" As she entered the room, she tripped on the door saddle, and landed on the floor, while the heavy book she was carrying clattered behind her. As she fell, she yelled, "Oh, my foot!" She remained on the floor, intermittently moaning, and clutching her right ankle as if in pain, until either the subject helped or one minute had passed. The subject had to turn his/her head to the left to see the victim, who was in unobstructed view at a 14 foot distance from the subject's chair.

In the case where the subject ignored the victim (category 0), after one minute the victim slowly got up, gingerly put weight on her bad foot, hopped on her good foot to retrieve the book, and while holding on to the wall, she limped out. As she left she turned to the subject and said the preset phrase, "I think my ankle will be better soon."
If the subject gave category 1 response and asked, "Are you okay?" or "Are you hurt?" the victim responded with the standard phrase, "I hurt my ankle." If the subject pursued verbally and asked the question, "Do you need help?" the victim provided the final standard and neutral phrase in her repertoire, "I don't know." If no action followed, the victim proceeded to get up and go out in the manner described for zero response. Two verbal statements made to the victim were added to this response category: "I'd help you but I'm doing something else," or, "I'll help you when I've finished."

In the case where the subject went for indirect help (categories 2 and 4) the victim was sitting in the chair when the subject returned with the experimenter, who role-played with the victim and helped her out.

When the subject helped the victim directly but relatively superficially (category 3), asking the victim if she was all right or peering at her and deciding she was, or helped her to the chair, the victim left in the same manner as in category 0 after the subject started back to the table.

For the prolonged helping response (category 5 a, b, or c), the interchange between subject and victim was kept minimal, but natural, in the interest of maintaining credibility. Interaction was preset to end at approximately two minutes. At the end of this time, the victim usually initiated leaving procedures, and limpingly left. For all helping
responses, the victim thanked the subject.

**Validating the experimental hypotheses.** The experimenter returned to the experimental room 14 minutes after the subject started the tasks, stopping first to receive a gestural sign from the confederate indicating the subject's response. All subjects had completed the materials except for the few subjects under High OL who had turned off the machines to help the victim and had resumed their second viewing of the slides and listening to the numbers. These subjects were left to finish. Before launching into a detailed discussion and elaborate debriefing procedure, the subject's self-report on the post-experimental questionnaire was briefly reviewed.

In order to ascertain each subject's perception of the experimental purpose, a control for demand characteristics as proposed by Orne (1962) was included in the Post-Experimental questionnaire. As the final question, the subject was asked, "What do you think the experimenter may find from this experiment?" Six of the seven subjects discarded from the analysis hypothesized the true nature of the experiment. Of the 126 remaining subjects, 96% (N = 121) expressed that the experimenter would find a difference between the sexes in handling the visual and auditory stimuli items, while 4% (N = 5) stated that they had no idea what the experimenter might find in relation to Part I of the study.
Discussion and debriefing. The discussion was opened according to a preset plan of probing for the subject's reaction to the emergency incident, and started with reference to the subject's rating of the combination of tasks on the post-experimental measure. The experimenter said, "Your rating tells me that you found the tasks easy/moderate/difficult. How did the experiment go?" The subject who had provided help usually mentioned the episode spontaneously, in contrast to the non-helping subjects who usually referred back to the tasks in response. When the helping subject mentioned the incident, the following questions were asked sequentially: (1) What happened? (2) What did you do to help? (3) What prompted that response? (4) What do you suppose that incident was all about? For the non-helping subjects who mentioned the incident, the first and last questions were asked as listed, while questions two and three were modified: (2) What was your response? (3) Can you offer any reasons for your response (i.e. lack of helping response)? For the subject who needed prodding, there were four prepared cues presented as necessary. For category 0 respondents, all the cues were often necessary, while for category 1 non HELPERS, one or two were sufficient in most instances. The cues were presented as follows: (a) I heard something happened, that a girl came into the room looking for someone. (b) She had an accident. (c) She was on the
floor with a hurt foot. (d) She got up and left after a minute had passed. Following the last cue, the subject was asked the final question, "What do you suppose that incident was all about?"

It was clearly established in the discussion that all subjects perceived the victim's fall. One subject perceived her as either drunk or drugged and this male's statement that his "policy is not to get involved under such circumstances" indicated his decision not to help. For the other non-helpers, the statements made by those who ignored the victim in contrast to those who offered verbal communication indicated a perceptual distinction. Category 0 respondents repeatedly made the statement, "It was not my concern." Other statements included, "It was not my doing;" or,"Tom/ Jim was not in;" or,"I was doing this (pointing to machines)." Category 1 respondents reported: "I asked the girl to wait until I was done but she left;" or, "My first instinct was to help her but number 26 came up and it got my attention, so I stuck with that;" or,"I said one more slide, then just one more, and in a few seconds she got up and left." The modal statement made by this group echoed the recurring theme, "I thought about helping her, but my parents trained me to stick with one job until it's done properly, and I did just that." In contrast to these nonhelpers, the helping subjects simply stated that a girl was hurt and needed help, so they helped.
A detailed debriefing ensued. The mode of debriefing provided the non-helping subject justification for his/her behavior, which has been found to lower tension (Ring, Wallston, & Corey, 1970). These subjects were told that their response was typical; if innocent bystanders provided help there would be no need to study the issue. Verbally, 99% (N = 125) agreed that the deception was necessary, and that they were neither offended nor that their psychological rights had been violated (APA, 1973). One non-helping subject indicated that she was still upset despite the justification offered. Generally, positive comments were made about the experiment. Each subject agreed to support the deception until the time a notice was posted announcing the study's termination. The subject then self-addressed an envelope in order to receive a forthcoming summary of the results. Each subject was then thanked for participating and reminded to take the payment as he/she left.
CHAPTER IV
RESULTS

Effectiveness of the Overload Manipulation

The effectiveness of the Overload treatment was assessed by self-report on the post-experimental questionnaire. The subjects rated difficulty level for each of the three tasks and the combination of these tasks, under conditions of either overload (High OL) or no overload (Low OL), on a Likert type seven-point scale which ranged from Easy to Very Difficult. A mixed design analysis of variance was performed on the scores obtained in rating the visual stimulus, the auditory stimulus, recording the answers, and these three tasks in combination. The overall result and those of each of the four measures yielded a difference between Overload conditions significant beyond the .01 level. The overall mean score for the overloaded condition (High OL) was 4.63, and the combination of tasks received the highest rating of difficulty ($M = 5.55$). Within Low OL, the overall mean score was 1.65, and again the combination of tasks was judged at the highest level of difficulty among the measures ($M = 1.95$).

Behavioral Measures of Helping

The Dependent Measure: Helping Behavior

The first stage of the analysis dealt with the behavioral
measures of helping. The means and standard deviations, in magnitude of response, for the three Residence groups, and these groups under each Overload condition, are presented in Table 1.

From this table it is evident that a lower rate of helping behavior was provided by the Rural group than by either of the other two groups. Furthermore, it is seen that the lowest rate of helping, regardless of condition, was demonstrated by the Rural group under Low OL. These findings are puzzling, and do not conform to expected effects.

An unweighted means analysis of variance was performed on the data from this scaled dependent measure, and the summary table is presented in Table 2.³

The analysis indicates that the Residence variable is significantly related to helping behavior. A Newman-Keuls Test for multiple comparisons was performed on the overall means and the interaction means. Overall, the Honolulu and Mainland Urban groups did not differ from each other in helping responses, while a significantly lower rate of helping was demonstrated between the Rural group and both Honolulu and Mainland Urban groups (p < .05). In the Residence X Overload interaction, the Honolulu and Mainland groups did not differ from each other within either the High OL or Low OL conditions. Both of these groups under Low OL were significantly different from the Rural group in the same condition
Table 1
Means and Standard Deviations of Helping Responses:
Main and Interaction Residence by Overload Effects

<table>
<thead>
<tr>
<th>Residence</th>
<th>M</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Honolulu</td>
<td>2.51</td>
<td>1.85</td>
</tr>
<tr>
<td>Mainland</td>
<td>2.86</td>
<td>2.04</td>
</tr>
<tr>
<td>Rural</td>
<td>1.67</td>
<td>1.94</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Residence</th>
<th>Overload</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>S.D.</td>
</tr>
<tr>
<td>Honolulu</td>
<td></td>
<td>1.86</td>
<td>1.52</td>
</tr>
<tr>
<td>Mainland</td>
<td></td>
<td>2.14</td>
<td>2.01</td>
</tr>
<tr>
<td>Rural</td>
<td></td>
<td>1.90</td>
<td>2.14</td>
</tr>
</tbody>
</table>
Table 2

Summary Table of Analysis of Variance: Helping Responses

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residence (A)</td>
<td>2</td>
<td>15.8132</td>
<td>4.3741**</td>
</tr>
<tr>
<td>Overload (B)</td>
<td>1</td>
<td>18.9137</td>
<td>5.2318*</td>
</tr>
<tr>
<td>Sex (C)</td>
<td>1</td>
<td>6.4072</td>
<td>1.7723</td>
</tr>
<tr>
<td>A X B</td>
<td>2</td>
<td>12.1975</td>
<td>3.3740*</td>
</tr>
<tr>
<td>A X C</td>
<td>2</td>
<td>5.7364</td>
<td>1.5868</td>
</tr>
<tr>
<td>B X C</td>
<td>1</td>
<td>0.5091</td>
<td>0.1408</td>
</tr>
<tr>
<td>A X B X C</td>
<td>2</td>
<td>2.1184</td>
<td>0.5860</td>
</tr>
<tr>
<td>S(ABC)</td>
<td>114</td>
<td>3.6152</td>
<td></td>
</tr>
</tbody>
</table>

* p < .05
** p < .02
(p < .05). Although the response average was higher under High OL than under Low OL for the Rural group, the difference was nonsignificant. In addition, the mean of the Rural group under Low OL did not differ significantly from any of the three Residence means under High OL.

The main Overload effect shows that the helping behavior of subjects under the Low OL condition (M = 2.71) was significantly higher than that of High OL subjects (M = 1.97), p < .03. However, the Residence X Overload interaction means reveal that this difference can be totally accounted for by the helping responses provided by the Honolulu and Mainland groups. These group means reflect substantially higher rates of helping under the Low OL condition than would be expected from the overall figure. Moreover, a significant within group difference was revealed by the Newman-Keuls Test for the Mainland group between the High OL and Low OL means (p < .05), while the Honolulu group approached within group significance between Overload conditions (p < .10).

The Sex variable did not approach significance for any results.

Help vs. No Help

To answer the general question of whether or not the subject provided aid to the victim, the data is viewed in absolute terms of response frequencies. The subject's behavior was categorized into Help (scores of 2 or above)
vs. No Help (scores of 0 or 1), and percentages were calculated. Of the total number of subjects, 50.80% (N = 64) offered some type of help to the victim, while 49.20% (N = 62) did not, for no absolute difference between categories. A series of chi square analyses on each of the variables yielded significant differences only for the Residence groups in relation to the number of Helpers and Non-Helpers, \( x^2 (2) = 6.62, p < .05 \). It can be seen that while 59% of the urban subjects helped the victim, only 35% of the rural residents did so, for the significant difference noted above. A breakdown in response frequencies for each of the variables is presented in Table 3.

**Performance Assessment as Dependent Measure**

The Residence X Overload interaction means of the analysis of variance, with magnitude of helping response as the dependent measure, revealed that the overall lower rate of helping demonstrated by the Rural group was entirely accounted for by the lower response average under Low OL than that of each Urban group. When the number of helpers from the dichotomous measure is broken down into Residence groups under High OL (total N = 28), it is seen that the frequencies are equally distributed: Honolulu, N = 10; Mainland, N = 9; Rural, N = 9. When the helping frequency is separated under the Low OL condition (total N = 36), the equivalence disappears for the Rural group: Honolulu, N = 14; Mainland, N = 16; Rural,
Table 3

Frequency Distribution of Number and Percentage of Subjects by Variable in Relation to Help vs. No Help

<table>
<thead>
<tr>
<th>Variable</th>
<th>Response Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Help</td>
</tr>
<tr>
<td></td>
<td>50.80%</td>
</tr>
<tr>
<td></td>
<td>(64)a</td>
</tr>
<tr>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>Residence</td>
<td></td>
</tr>
<tr>
<td>Honolulu</td>
<td>58.54%</td>
</tr>
<tr>
<td></td>
<td>(24)</td>
</tr>
<tr>
<td>Mainland</td>
<td>59.52%</td>
</tr>
<tr>
<td></td>
<td>(25)</td>
</tr>
<tr>
<td>Rural</td>
<td>34.88%</td>
</tr>
<tr>
<td></td>
<td>(15)</td>
</tr>
<tr>
<td>Overload</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>43.75%</td>
</tr>
<tr>
<td></td>
<td>(28)</td>
</tr>
<tr>
<td>Low</td>
<td>56.25%</td>
</tr>
<tr>
<td></td>
<td>(36)</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>45.31%</td>
</tr>
<tr>
<td></td>
<td>(29)</td>
</tr>
<tr>
<td>Male</td>
<td>54.69%</td>
</tr>
<tr>
<td></td>
<td>(35)</td>
</tr>
</tbody>
</table>

Note: The correction factor for df = 1 is used in all chi-square analyses where applicable.

*aNumbers in parentheses are N's.
These findings led to analyses of the answers to the stimulus items recorded by the subjects under the differential demands of the Overload treatment.

A coping criterion was established as 50% response to both sets of stimuli, regardless of number correct. All subjects reached the coping criterion except four from the Rural group under High OL (two males and two females). Two of these subjects responded adequately to the visual stimulus only, while the other two responded primarily to the auditory stimulus.

The visual and auditory scores were converted into proportions in order to provide equivalence. An analysis performed on the amount of stimulus items to which each subject responded revealed no significant differences between the groups. Then, the proportion of correct responses was determined. The means and standard deviations for the three Residence groups, and these groups under each Overload condition, are presented in Table 4. The summary table of the between groups effects and significant within groups effects obtained from the mixed design unweighted means analysis of variance is shown in Table 5.

The analysis demonstrated significant differences between treatments for each of the three main effects and the Residence X Overload and Overload X Sex interaction. A Newman-Keuls Test performed on both sets of Residence
Table 4
Means and Standard Deviations of Proportion of Correct Responses to Both Sets of Stimuli: Main and Interaction Residence Effects

<table>
<thead>
<tr>
<th>Residence</th>
<th>M</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Honolulu</td>
<td>.8903</td>
<td>.1561</td>
</tr>
<tr>
<td>Mainland</td>
<td>.8838</td>
<td>.1481</td>
</tr>
<tr>
<td>Rural</td>
<td>.8135</td>
<td>.2468</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Residence</th>
<th>Overload</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>S.D.</td>
<td>M</td>
</tr>
<tr>
<td>Honolulu</td>
<td>.8095</td>
<td>.1806</td>
<td>.9751</td>
</tr>
<tr>
<td>Mainland</td>
<td>.7998</td>
<td>.1645</td>
<td>.9678</td>
</tr>
<tr>
<td>Rural</td>
<td>.6509</td>
<td>.2658</td>
<td>.9687</td>
</tr>
</tbody>
</table>
Table 5
Summary Table of Analysis of Variance:
Proportion of Correct Responses to Both Sets of Stimuli

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residence (A)</td>
<td>2</td>
<td>0.1800</td>
<td>8.1060**</td>
</tr>
<tr>
<td>Overload (B)</td>
<td>1</td>
<td>2.9764</td>
<td>134.0193**</td>
</tr>
<tr>
<td>Sex (C)</td>
<td>1</td>
<td>0.0903</td>
<td>4.0668*</td>
</tr>
<tr>
<td>A X B</td>
<td>2</td>
<td>0.1663</td>
<td>7.4900**</td>
</tr>
<tr>
<td>A X C</td>
<td>2</td>
<td>0.0025</td>
<td>0.1114</td>
</tr>
<tr>
<td>B X C</td>
<td>1</td>
<td>0.1211</td>
<td>5.4523*</td>
</tr>
<tr>
<td>A X B X C</td>
<td>2</td>
<td>0.0109</td>
<td>0.4887</td>
</tr>
<tr>
<td>S(ABC)</td>
<td>114</td>
<td>0.0222</td>
<td></td>
</tr>
<tr>
<td>Within</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repeated Measures (D)</td>
<td>1</td>
<td>1.0787</td>
<td>84.6110**</td>
</tr>
<tr>
<td>B X D</td>
<td>1</td>
<td>0.3729</td>
<td>29.2472**</td>
</tr>
<tr>
<td>S(ABC)D</td>
<td>114</td>
<td>0.0127</td>
<td></td>
</tr>
</tbody>
</table>

* p < .05
** p < .01
means confirmed the suspected differences for the Rural group who scored significantly lower than the other two groups overall \((p < .05)\) and in the interaction under the High OL condition \((p < .01)\). The main Overload means accurately reflect the group differences in this analysis: High OL=.7534 and Low OL=.9704. Two Sex effects reached minimal significance, and demonstrated female superiority in the main effect and in the interaction under High OL, while the male scores slightly surpassed the female's under the Low OL condition. Within groups on the repeated measures, the means showed strong differences between the visual and auditory sets of stimuli, with substantially lower scores found on the visual task. Likewise, the Overload X Stimuli interaction means reflected these differences in a more pronounced manner than the subject's self-ratings.

The individual scores of the Rural group subjects under High OL were categorized, and almost equally fell above or below the group mean of .6509. A 2 X 2 chi square analysis showed no significant difference in scores for helpers or non helpers. These findings of the helping measures and performance assessment analyses can be summarized as follows: (a) significant differences in less helping for the Rural group were found under Low OL where there was no difference in task performance, and (b) significant differences in task performance were found for the Rural group under High OL where there were no differences in helping.
Correlates of Helping

Personality Measures as Predictors

The second stage of the analysis was designed to investigate the personality measures administered in the first group session as predictors of helping behavior. As indicators of the broad construct flexibility in the measures of cognitive interference and cognitive complexity, the Stroop Color and Word Test (Stroop) and the Barron Complexity Scale (BCS) were each computed to yield a single score per measure for each subject. These variables then were combined with the Residence, Overload, and Sex factors into a single optimally weighted linear composite. The multiple regression model was used to evaluate the nature and differential strengths of effects of these various independent variables on the quantitative dependent variable, helping behavior.

Stepwise mode regression procedures were used to enter each variable into the equation (Nie, Bent, & Hull, 1970). Individual variable F values (significance of b weights) were computed for all the independent variables, and F values were also computed for the overall regression equation at each step. Residence, as a multicharacter qualitative variable, involves no empirically derived ordinal scale of measurement. Therefore, this independent variable was appropriately expanded into two dummy variables to represent group membership (Mainland and Honolulu, 1 = Yes, 0 = No). The dichotomous
variables of Overload and Sex involve only one interval, so that there is no problem of differences in score intervals (assigned values of 1 = High OL and Male while 0 = Low OL and Female). The summary table of the multiple regression analysis, in stepwise order of entry, for both the scaled helping responses and the Help vs. No Help dichotomy as dependent measures is reported in Table 6.

An examination of these data reveal that the Barron Complexity Scale emerged as the most significant predictor of helping with both dependent measures. It is seen that the Residence and Overload variables significantly correlate with the scaled dependent measure, while the Sex variable is not a significant predictor. These results corroborate the findings of the analysis of variance, while clearly showing the higher degree of help provided by the Mainland Urban reared subjects among the Residence groups. This difference between groups is minimized when the helping measure is dichotomized rather than scaled, and the strength of the Overload contribution is lessened to a nonsignificant level of correlation. The Stroop did not demonstrate predictive power of helping behavior in either analysis, and proved insufficient for computation in the dichotomized measure.

Behavioral and Personality Measures
Helping Responses as Dependent Measure: BCS as Covariate

The finding that the BCS is the most significant predictor
Table 6
Summary Table of Stepwise Multiple Regression Analysis:
Scaled and Dichotomized Helping Responses

<table>
<thead>
<tr>
<th>Variable</th>
<th>r</th>
<th>R</th>
<th>$R^2$</th>
<th>RSQ Change</th>
<th>b</th>
<th>Beta</th>
<th>F Individual</th>
<th>F Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mainland</td>
<td>.18</td>
<td>.18</td>
<td>.03</td>
<td>.03</td>
<td>.80</td>
<td>.19</td>
<td>3.277</td>
<td>4.229 (1/124)*</td>
</tr>
<tr>
<td>Honolulu</td>
<td>.06</td>
<td>.25</td>
<td>.06</td>
<td>.03</td>
<td>.60</td>
<td>.14</td>
<td>1.987</td>
<td>4.062 (2/123)*</td>
</tr>
<tr>
<td>Overload</td>
<td>-.19</td>
<td>.31</td>
<td>.10</td>
<td>.04</td>
<td>-.70</td>
<td>-.17</td>
<td>4.162*</td>
<td>4.403 (3/122)**</td>
</tr>
<tr>
<td>BCS</td>
<td>.30</td>
<td>.38</td>
<td>.15</td>
<td>.05</td>
<td>.08</td>
<td>.23</td>
<td>6.493*</td>
<td>5.192 (4/121)**</td>
</tr>
<tr>
<td>Sex</td>
<td>.11</td>
<td>.39</td>
<td>.16</td>
<td>.01</td>
<td>.39</td>
<td>.10</td>
<td>1.341</td>
<td>4.430 (5/120)**</td>
</tr>
<tr>
<td>Stroop</td>
<td>.04</td>
<td>.39</td>
<td>.16</td>
<td>.00</td>
<td>.00</td>
<td>.02</td>
<td>0.049</td>
<td>3.670 (6/119)**</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>r</th>
<th>R</th>
<th>$R^2$</th>
<th>RSQ Change</th>
<th>b</th>
<th>Beta</th>
<th>F Individual</th>
<th>F Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mainland</td>
<td>.12</td>
<td>.12</td>
<td>.01</td>
<td>.01</td>
<td>.15</td>
<td>.14</td>
<td>1.854</td>
<td>1.919 (1/124)</td>
</tr>
<tr>
<td>Honolulu</td>
<td>.11</td>
<td>.23</td>
<td>.05</td>
<td>.04</td>
<td>.18</td>
<td>.16</td>
<td>2.677</td>
<td>3.409 (2/123)*</td>
</tr>
<tr>
<td>BCS</td>
<td>.29</td>
<td>.34</td>
<td>.12</td>
<td>.05</td>
<td>.02</td>
<td>.23</td>
<td>6.200*</td>
<td>4.029 (4/121)**</td>
</tr>
<tr>
<td>Sex</td>
<td>.11</td>
<td>.36</td>
<td>.13</td>
<td>.01</td>
<td>.10</td>
<td>.10</td>
<td>1.291</td>
<td>3.489 (5/120)**</td>
</tr>
<tr>
<td>Stroop</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>-----</td>
<td>-----</td>
</tr>
</tbody>
</table>

Tolerance Level = .969

Note. N = 126, df = 1/125. *p < .05. **p < .01
of helping behavior gave rise to additional analyses integrating the behavioral and personality measures. An analysis of covariance performed with the scaled helping responses as the dependent measure and the BCS scores as the covariate is presented in Table 7, along with the previous analysis of variance.

These data show that the significant difference in magnitude of helping responses obtained between the Rural group and the Urban groups in the analysis of variance is statistically removed by partialling out the variance due to the BCS as covariate. While the significant Residence X Overload interaction effect is retained in the analysis of covariance, a Newman-Keuls subsequent test showed only one significant difference between the groups. Whereas the significant difference between the Mainland and Rural groups under Low OL in the analysis of variance reached the .01 level when considered in terms of a single mean comparison, this difference is significant at the .05 level in the present analysis. As the means converged in the analysis of covariance (upwards for the Rural group), the difference between the Honolulu subjects and the Rural sample under Low OL only approached significance at the conventional level (p > .05), as opposed to the significant difference obtained in the analysis of variance. For the other variables, the significant differences obtained from the analysis of variance are
<table>
<thead>
<tr>
<th>Source</th>
<th>Analysis of Variance</th>
<th>Analysis of Covariance</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>df</td>
<td>MS</td>
<td>F</td>
<td>df</td>
</tr>
<tr>
<td>Residence (A)</td>
<td>2</td>
<td>15.8132</td>
<td>4.3741**</td>
<td>2</td>
</tr>
<tr>
<td>Overload (B)</td>
<td>1</td>
<td>18.9137</td>
<td>5.2318*</td>
<td>1</td>
</tr>
<tr>
<td>Sex (C)</td>
<td>1</td>
<td>6.4072</td>
<td>1.7723</td>
<td>1</td>
</tr>
<tr>
<td>A X C</td>
<td>2</td>
<td>5.7364</td>
<td>1.5868</td>
<td>2</td>
</tr>
<tr>
<td>B X C</td>
<td>1</td>
<td>0.5091</td>
<td>0.1408</td>
<td>1</td>
</tr>
<tr>
<td>A X B X C</td>
<td>2</td>
<td>2.1184</td>
<td>0.5860</td>
<td>2</td>
</tr>
<tr>
<td>S(ABC)</td>
<td>114</td>
<td>3.6152</td>
<td></td>
<td>113</td>
</tr>
</tbody>
</table>

* p < .05
** p < .02
less affected. The analysis of covariance reveals virtually no change in the overall Overload result, and the Sex effects are further minimized. In sum, it is demonstrated that the BCS is highly related to the qualitative Residence variable as a factor influencing helping behavior.

**Complexity Scale Scores as Dependent Measure**

As a check to insure equality of the subjects under each Overload condition on the BCS, these scores were subjected to an unweighted means analysis of variance with the three treatment variables. The BCS is scored as a positive integer from one to 50 in the direction of complexity. The summary table of the analysis is presented in Table 8.

As expected, the overall Overload results and the Residence X Overload interaction showed no significant differences between groups. When the F value obtained for the overall Residence effect with helping responses as the dependent measure is compared to the F value for the BCS scores, it is evident that the BCS better differentiates between the groups. A Newman-Keuls Test performed on these significant Residence means revealed the same pattern of results between the groups as the corresponding analysis of variance: the Honolulu and Mainland groups scored alike while the Rural group scored significantly lower than each of these groups ($p < .05$).

While the overall Sex variable did not come near significance, sex differences were apparent in interaction effects. The
Table 8
Summary Table of Analysis of Variance:
Complexity Scale Scores

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residence (A)</td>
<td>2</td>
<td>260.9265</td>
<td>9.5825**</td>
</tr>
<tr>
<td>Overload (B)</td>
<td>1</td>
<td>11.0869</td>
<td>0.4072</td>
</tr>
<tr>
<td>Sex (C)</td>
<td>1</td>
<td>12.0104</td>
<td>0.4411</td>
</tr>
<tr>
<td>A X B</td>
<td>2</td>
<td>18.4317</td>
<td>0.6769</td>
</tr>
<tr>
<td>A X C</td>
<td>2</td>
<td>98.9093</td>
<td>3.6324*</td>
</tr>
<tr>
<td>B X C</td>
<td>1</td>
<td>174.2364</td>
<td>6.3988*</td>
</tr>
<tr>
<td>A X B X C</td>
<td>2</td>
<td>0.1366</td>
<td>0.0050</td>
</tr>
<tr>
<td>S(ABC)</td>
<td>114</td>
<td>27.2295</td>
<td></td>
</tr>
</tbody>
</table>

* p < .05
** p < .01
mean scores on the BCS and the standard deviations for the Residence groups of each Sex are presented in Table 9.

Table 9

Means and Standard Deviations of Complexity Scale Scores: Residence by Sex Interaction

<table>
<thead>
<tr>
<th>Residence</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>S.D.</td>
</tr>
<tr>
<td>Mainland</td>
<td>23.50</td>
<td>5.23</td>
</tr>
<tr>
<td>Rural</td>
<td>19.04</td>
<td>4.62</td>
</tr>
</tbody>
</table>

The data clearly emphasizes the differences in the direction of complexity. A Newman-Keuls subsequent test showed that Mainland males scored significantly higher than males of the other groups and from Rural group females, while not significantly different from either Honolulu or Mainland females. It is interesting to note that, while as predicted, there were no sex differences found when helping responses were the dependent measure, the pattern of those interaction means and the absolute frequencies obtained in the dichotomized measure both reflect the same rank order as these BCS means.
The Relationship Between BCS Scores and Helping Responses

The subjects' BCS scores ranged from 12.0 to 37.0, with the mean at 22.61 and a standard deviation of 5.69. The sample mean falls midway between those for comparable college student populations reported by Barron (1963) and Conklin, Boersma and Zingle (1967). Of the total sample, 39% (N = 49) scored above 23.0 and 49% (N = 62) scored below 22.0, while 12% (N = 15) of the scores were equally clustered around the fractional mean. The BCS contains several reverse items which protects it from acquiescence or response set, and with the exception of a single subject whose answers are suspect, the subjects' scores appear free from bias due to this artifact.

As a personality trait, the complexity and simplicity dimensions were viewed on a continuum. The scores were categorized first into five classes of performance on the basis of standard deviation units. The rounded value of 5.50 constitutes one unit in either direction. This frequency distribution of subjects by Residence Groups in relation to BCS scores is depicted in Figure 1.

It is seen that the total sample's scores (N = 126) are within three standard deviations of the mean, while 60% (N = 75) of the sample falls within one standard deviation and 93% (N = 117) falls within two. The median is slightly less than the mean (median = 22.0), but the value obtained
Figure 1. Number of Subjects in Each Residence Group Scoring at Different Levels of Barron Complexity Scale.
in computing the Pearsonian coefficient of skewness was small, so that the scores can reasonably be described as normally distributed.

While there are no absolute differences in the number of subjects who scored either Below the mean (N = 26) or Above the mean (N = 25), the Residence groups significantly differ in number of scorers in excess of one standard deviation Below the mean, \( \chi^2 (2) = 9.30, \ p < .01 \). Each of the Urban groups have an equal number of Below the mean scorers (N = 5 = 19%), and the Rural group has a significantly higher number (N = 16 = 62%) than either of these groups, \( \chi^2 (1) = 4.76, \ p < .05 \). In scorers Above the mean, no significant differences are found between the groups, but the Rural group scorers in this class are significantly less in number than the Mainland Urban subjects in a single comparison, \( \chi^2 (1) = 4.27, \ p < .05 \). It can be seen that for the Rural group subjects who scored Above the mean, the scores fall only in the extreme end of the distribution, in contrast to the Honolulu group in which no subjects scored in this class. Inspection of these Rural group subject's background history revealed that all were currently residing in urban centers, that two of the three were above the 25-year-old age range and had reported an approximate 10-year period away from rural life.
Next, in relation to helping responses, the range of BCS scores was compressed into the following three classes: (a) Mean scorers (18.0 through 27.0), (b) Below Mean scorers (less than 18.0), and (c) Above Mean scorers (more than 27.0). This distribution is reported in Table 10.

Table 10

Relationship of Complexity Scale Scores and Helping Responses: Frequency Distribution of Number of Subjects and Help vs. No Help

<table>
<thead>
<tr>
<th>Number of Subjects</th>
<th>Category</th>
<th>Helper Responses</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Help</td>
<td>No Help</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- M</td>
<td>+ M</td>
<td>= M</td>
</tr>
<tr>
<td>Honolulu</td>
<td>1</td>
<td>6</td>
<td>17</td>
</tr>
<tr>
<td>Mainland</td>
<td>1</td>
<td>7</td>
<td>17</td>
</tr>
<tr>
<td>Rural</td>
<td>2</td>
<td>2</td>
<td>11</td>
</tr>
</tbody>
</table>

Table 10 reveals that 94% ($N = 60$) of the Helpers scored in the classes Equal To or Above the mean. Moreover, among the number of subjects who scored as more complex, a marginally significant difference was found between those who provided Help as opposed to No Help, $\chi^2 (1) = 3.61, p < .10$. 
A substantial proportion of the Non- Helpers, 35% (N = 22), scored Below the mean. The number and percentage of subjects who scored Below the mean and provided Help (N = 4 = 15%) as compared to those who did Not Help (N = 22 = 85%) confirmed the magnitude of this significant difference, $\chi^2 (1) = 11.12$, $p < .001$. Moreover, of the total 26 subjects who scored Below the mean, 62% (N = 16) were from the Rural group, and 88% (N = 14) of these were in the No Help category. Therefore, on the basis of BCS scores, the number of Non- Helpers is significantly different between Residence groups, $\chi^2 (2) = 8.62$, $p < .02$, and is in line with the group differences obtained for helping responses before the BCS scores were used as a covariate.

In sum, 100 subjects scored in the range of complexity, while 26 subjects scored in the direction of simplicity. Among the more complex scoring subjects, Helping actions were provided more often than Non-Helping responses. A far greater number of the less complex scorers responses were in the No Help category, and among them the Rural subjects were significantly more represented than subjects from either of the Urban groups.

A further breakdown was made into Overload levels. No significant differences were found for subjects who scored Equal To and Above the mean on the BCS or for Residence groups in any comparisons within and between the Help category.
of the dichotomy. In accord with the higher scores obtained by Mainland Urban males on the BCS, these subjects in the Low OL cell were unique in that they all provided help. In striking contrast to this 100% helping response is the 36% figure obtained for Rural males in this nonoverloaded condition.

However, significant differences emerged in this analysis with BCS scores that focused on Below the mean scorers within the No Help category. The total number of subjects who scored Below the mean was comparably distributed between the two Overload levels (High OL N = 14; Low OL N = 12), but a greater number of the Rural group subjects were represented in both (N = 8 in each) than subjects from the Urban groups. This difference was significant within Low OL, χ² (2) = 6.50, p < .05. It was found that all subjects with depressed BCS scores who were overloaded (High OL) did not help (N = 13) significantly more than they helped (N = 1), χ² (1) = 8.64, p < .01, while this effect failed to be significant among nonoverloaded subjects. However, in the Low OL condition, the number of subjects who scored Below the mean on the BCS and did Not Help was significantly different between Residence groups, χ² (2) = 8.67, p < .05. The Rural group had a higher number of subjects characterized by this combination of less complexity and nonhelping response than either the Honolulu or Mainland groups, and the difference was significant between Rural and Honolulu, χ² (1) = 5.14, p < .05.
The results of this analysis serve to clarify the reverse pattern of less helping responses shown by the Rural group subjects in Low OL. In general, depressed complexity scores did not affect helping behavior for subjects who were not overloaded (Low OL). However, there were a significantly higher number of Rural group subjects who scored as less complex and were nonhelpers more often than helpers, regardless of Overload condition.

Subsidiary Analyses

Qualitative Analysis Among Helping Responses

In addition to analyses on the quantitative nature of the helping responses and on the predictors of helping behavior, the data was subjected to subsidiary analyses. In order to investigate the qualitative nature of the responses, the subsamples of Helpers (N = 64) and Non-Helpers (N = 62) were categorized into frequency distributions and chi square procedures were performed along relevant dimensions.

For the Non-Helping subjects, the responses were comparably distributed between the two categories of 0, in which the subject ignored the victim, and 1, in which the subject spoke to the victim regarding the incident but did not offer help. For the 30 subjects in category zero and 32 in category one there were no quantifiable differences. However, based on the distinctions afforded by the BCS score dimensions, there are observable differences in the response frequencies.
The frequency of responses obtained between the two Non-Helping categories in relation to the BCS scores is reported in Table 11.

Table 11
Frequency Distribution of Number of Non-Helpers Between Categories in Relation to Complexity Scale Scores

<table>
<thead>
<tr>
<th>Number of Subjects</th>
<th>Category</th>
<th>0</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- M</td>
<td>+ M</td>
<td>= M</td>
</tr>
<tr>
<td>Honolulu</td>
<td>2</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Mainland</td>
<td>3</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Rural</td>
<td>9</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>32</td>
<td></td>
</tr>
</tbody>
</table>

It is evident from the table that the Rural subjects had more respondents in the zero category than the other groups. This difference was significant between Residence groups, \( \chi^2 (2) = 9.80, p < .01 \), and is reflected in the larger number of subjects who equally scored Below and Equal To the mean. It can be seen that all subjects who scored Above the mean offered some kind of response (i.e. did not ignore the victim). No significant differences were found among category 1 respondents, nor in the number of respondents between Overload levels in either category.
Within the helping classification, the four kinds of possible responses included: 2 = indirect help, 3 = direct rapid help, 4 = direct rapid and indirect help, 5 = direct prolonged help. Among the 64 helpers, a total of 28 subjects (44%) gave categories two, three, or four responses, for no difference in frequency between categories. The far greatest number of respondents were in category five where 36 subjects (56%) offered prolonged aid. Marked differences were obtained in response frequencies between categories, \( \chi^2 (3) = 34.00, p < .001 \). In category five, chi square values failed to reach significance between respondents for the Residence, Overload, or Sex variables, although the Mainland group had more respondents than the other Residence groups. This latter finding serves to specify the higher degree of involvement reflected in the scaled measure of the multiple regression analysis for the Mainland group. It can be concluded that direct and prolonged help was the preferred response choice for the subject who decided to help. In Table 12 the response frequencies across helping categories are presented.

As seen in Table 12, expansion within category five included three possible forms of responding specified as: a = flexible passive, b = flexible active, or c = rigid. The distinction should be recalled between the subject's preferred type of helping (category 5), as a cognitive
Table 12
Frequency Distribution of Number of Subjects Across Helping Categories by Residence Groups

<table>
<thead>
<tr>
<th>Number of Subjects</th>
<th>Category</th>
<th>Total</th>
<th>#5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>a</td>
<td></td>
</tr>
<tr>
<td>Honolulu</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td>Mainland</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Rural</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>28</td>
</tr>
</tbody>
</table>

decision-making process in a situation, and the subject's mode of response (a, b, or c) as a presumed stable pattern reflected over situations. It is evident that the flexible passive form was the most prevalent, $\chi^2 (2) = 10.17$, $p < .01$, while the two flexible forms combined comprised 78% of the response frequencies. A minimal significant difference was obtained between Residence groups on use of the flexible passive form, $\chi^2 (2) = 6.00$, $p < .05$. The Rural group used this form less than either of the urban groups, and employed the rigid form more than each of the flexible forms. In contrast, none of the Honolulu group subjects used the rigid form.
The value of chi square computed for the Residence, Overload, and Sex variables in relation to the three response forms demonstrated significant differences favoring use of the flexible passive form. Residence approached significance, $\chi^2 (4) = 8.25, p = .08$, Overload showed significant differences, $\chi^2 (2) = 6.44, p < .05$, as did the Sex variable, $\chi^2 (2) = 7.07, p < .05$. An interesting finding was that the seven responses in the flexible active mode were exclusively made by males.

The qualitative findings were not altered in relation to the BCS, either across the helping categories or within category five. These results confirm the analysis of BCS scores in relation to Help vs. No Help. The helpers scored as more complex than the nonhelpers. Of the total helpers ($N = 64$), 94% scored Equal To or Above the mean on the BCS. From the largest response category of prolonged help ($N = 36$), 97% ($N = 35$) of the respondents had scores Equal To or Above the mean. Within this category, 78% responded in a flexible mode.

In summary, the Rural group in the nonhelping sample had more subjects who scored Below the mean on the BCS and made significantly more zero category responses than either of the other groups, while no differences were found in category one response. Within the helping categories, the single dominant response to the emergency situation was direct
and prolonged help. Among these respondents the primary mode of approach was operationally defined as flexible passive. The qualitative nature of the helping responses remained unaffected by the BCS as covariate, while further confirming the relationship between helping actions and the complexity dimension in personality.

Correlates of Helping Behavior and of the Barron Complexity Scale

The final investigation entailed a regression analysis performed on the 50 items composing the BCS relative to the subjects scores on the measure. The scale's construct validity was demonstrated in relation to helping with $R^2 = .511$, and to BCS itself the $R^2 = .980$. A weak relationship was found in the content of nine BCS items and the subjects scores. When helping response was the criterion, no correlation was obtained for one item, while 27 items showed a weak correlation and 14 items correlated to a moderate degree. Eight BCS items correlated with helping at a significant level, and these correlates are listed in Table 13. Although the convention is not to include measures other than original formulations in the research, it appears necessary in this case in order to make the obtained correlations more meaningful (see Appendix E for BCS scale).

There were also the 28 relevant subject variables, both experimental and biographical, which were correlated with the
Table 13

Significant Correlates: Barron Complexity Scale Items and Scaled Helping Behavior Measure

<table>
<thead>
<tr>
<th>BCS Item</th>
<th>Helping Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>r&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>42</td>
<td>-.23**&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>25</td>
<td>-.19*</td>
</tr>
<tr>
<td>27</td>
<td>-.19*</td>
</tr>
<tr>
<td>39</td>
<td>-.19*</td>
</tr>
<tr>
<td>13</td>
<td>.185*&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td>48</td>
<td>.18*</td>
</tr>
<tr>
<td>3</td>
<td>-.17*</td>
</tr>
<tr>
<td>49</td>
<td>-.165*</td>
</tr>
</tbody>
</table>

*Note. In Barron's (1963) scoring, 25 items score as True while 25 items score as False. In the present scoring, credit was given for either answer to item 14, as the statement appears to have alternative interpretations.*

<sup>a</sup>For significance, r = .164 (p < .05), r = .230 (p < .01).

<sup>b</sup>Negative correlations indicate that the correct answer to the item is False (more complexity).

<sup>c</sup>Positive correlations indicate that the correct answer to the item is True (more complexity).

* p < .05.

** p < .01.
scaled and dichotomous helping measures and the BCS scores. The variables amassed from the Background Information Questionnaire which were not previously reported in analyses are as follows: Age, Ethnic Origin, Religious Affiliation, Religion as A Life Force, Major Field, Current Employment, Marital Status, Living Arrangements, Organization Membership, Skills, Moved a Lot During Growing Up Years, Region in Which Grew Up, Number of Children in Family, Ordinal Position, Extended Family During Childhood, Philosophy of Life, Educational Level of Mother and Father, Occupation of Mother and Father, and Birthplace of Mother and Father. All qualitative variables were dichotomized into categories of zero and one. Table 14 shows the significant correlates of helping behavior and/or the BCS. Values which significantly correlate only with the BCS are supplied in the helping measures columns for comparison purposes.

Of the 22 biographical variables that varied randomly, only five reached a significant level of correlation with scaled helping, and three of these were not significant when correlated with the dichotomized measure. It can be seen that the BCS correlates stronger with the subject background variables and with more of them than either of the helping measures. Residence (urban or rural) and Organization Membership (number of) were the only variables to correlate with all the measures.
Table 14

Significant Correlates of Helping Behavior and/or Barron Complexity Scale

<table>
<thead>
<tr>
<th>Variable</th>
<th>Scaled Help</th>
<th>Help vs. No Help</th>
<th>BCS Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban Residence</td>
<td>.24**</td>
<td>.23**</td>
<td>.33**</td>
</tr>
<tr>
<td>High Overload</td>
<td>-.19*</td>
<td>-.13</td>
<td>-.05</td>
</tr>
<tr>
<td>Number of Siblings</td>
<td>-.23**</td>
<td>-.22*</td>
<td>-.10</td>
</tr>
<tr>
<td>Number of Organizational Affiliations</td>
<td>.19*</td>
<td>.21*</td>
<td>.28**</td>
</tr>
<tr>
<td>Grew Up in Eastern U.S.A.</td>
<td>.17*</td>
<td>.10</td>
<td>.38**</td>
</tr>
<tr>
<td>Anglo-American Origin</td>
<td>.17*</td>
<td>.12</td>
<td>.37**</td>
</tr>
<tr>
<td>Independent Living Arrangements</td>
<td>.17*</td>
<td>.15</td>
<td>.30**</td>
</tr>
<tr>
<td>Age</td>
<td>.15</td>
<td>.21*</td>
<td>.17*</td>
</tr>
<tr>
<td>Having a Philosophy of Life</td>
<td>.04</td>
<td>.05</td>
<td>.31**</td>
</tr>
<tr>
<td>Religion As a Life Force</td>
<td>.06</td>
<td>.06</td>
<td>-.29**</td>
</tr>
<tr>
<td>Church Attendance</td>
<td>.09</td>
<td>.07</td>
<td>-.21*</td>
</tr>
<tr>
<td>Moved a Lot During Childhood</td>
<td>.02</td>
<td>.04</td>
<td>.22*</td>
</tr>
<tr>
<td>Married</td>
<td>.10</td>
<td>.13</td>
<td>.18*</td>
</tr>
<tr>
<td>Birth Order</td>
<td>-.09</td>
<td>-.08</td>
<td>-.18*</td>
</tr>
</tbody>
</table>

Note. N = 126, df = 124

\(a\) For significance, \(r = .164 (p < .05), r = .230 (p < .01)\)

\(\ast p < .05\)

\(\ast\ast p < .01\)
Chi square procedures were used for previously untested significant correlates of helping. A strong inverse linear relationship was observed with helping and Number of Children in the Family: the less children the more help. When the subject was an only child every subject provided prolonged help. The range was wide and the distribution uneven, and the chi square value was not significant between the two classes. The Region, Ethnic, and Living Arrangements variables were expanded into more precise categories in relationship to helping behavior, and no significant differences were obtained.

Summary of Analyses

1. The results of the behavioral analyses on helping responses demonstrated the Residence and Overload variables to be significantly related to helping behavior. The Rural group subjects provided less frequency and magnitude of helping overall, and this nonhelping response was dominant in the Low Overload condition.

2. The overall lower helping behavior of the Rural group was not contingent on lower performance scores in the High Overload condition.

3. Regression analysis revealed that helping behavior is influenced more by the Cognitive Complexity variable than the Overload or Residence variables.
4. An analysis of covariance resulted in partialling out the overall Residence effect while the interaction with Overload was retained.

5. The analysis of variance of the BCS as dependent measure revealed that Cognitive Complexity is significantly related to Residence while not to Overload.

6. Analysis for the relationship of the complexity scale scores and helping behavior demonstrated the effects of more and less complexity on helping among the Residence groups and levels of overload.

7. The qualitative comparisons further confirmed the relationship between helping actions and the cognitive complexity dimension in personality.

8. Of the many possible correlates with helping behavior, few significances were obtained. More correlates, and a stronger relationship, were found with the subject variables and the Barron Complexity Scale.
CHAPTER V
DISCUSSION

The threefold purpose of this study was as follows: to examine the behavior of rural and urban reared subjects of both sexes in their prosocial responsiveness to an unknown other; to test the effects of exposure to stimulus overload for inhibiting effects; and to seek relationships between the behavioral measures and individual difference trait variables as predictors of helping behavior. Scaled and dichotomized dependent measures were used to assess both the magnitude and frequency of helping response provided by the subject in the staged emergency situation. In sum, variation in helping behavior was explored as a function of variation in residence, overload, sex of subject, and trait variables.

The two striking findings were that the Rural group provided significantly less helping than either of the Urban groups, who did not differ from each other, and that the personality trait of cognitive complexity was the most critical determinant of subjects' reactions. An inter-relation between dispositional and situational factors as predictors of helping also was found, as demonstrated by the significant effects obtained for the overload treatment as well as for the demographic and cognitive complexity
individual difference variables. As predicted, the sex of the potential helper was inconsequential in affecting helping behavior, while the variable was related to tangential effects.

The percentages of helpers versus nonhelpers conformed to the intermediate level of response rates typically reported in the literature, and were nearly equivalent in absolute quantification. However, analyzed by Urban-Rural group responses, the significant differences were revealed. The dichotomized measure showed that although 59% of the Urban subjects helped, only 35% of the Rural subjects did so. The unexpected main effect of Residence, as revealed by examination of the scaled measure, was further seen in the significant Residence by Overload interaction of the analysis of variance. This latter effect served to specify that the lower magnitude and rate of helping demonstrated by the Rural group subjects could be attributed to their behavior in the Low Overload condition. These initially puzzling results were clarified through subsequent analyses, in which it was found that the demographic residence variable was not causal in and of itself for helping behavior. Rather, residence was significantly related to prosocial action through the dispositional measure of cognitive complexity. A consistent pattern emerged which provided confirmation for the influence of complexity on
residence, and in turn, on helping behavior.

The lack of comparative social responsiveness displayed by the Rural group did not conform to theories set forth by Wirth (1956), Milgram (1970), and Latané and Darley (1970), in which it was implied that rural residents would help more than urbanites. Instead, the pattern of effects for subjects who grew up in rural towns was indicative of significantly more social inhibition and less involvement than would be predicted from these theoretical bases. These theorists had specified factors in the immediate social environment as the critical determinants of responsiveness in their formulations. On the other hand, the results were in accord with Rosenthal's (1964a, 1964b) suggestion that the unwillingness to get involved was not a big-city phenomenon, and to Milgram and Hollander's (1964) proposal that relationships were not necessarily inferior in the city, but were organized on a different principle. Further similarities in results are provided from the empirical studies of environmental comparisons mentioned earlier. When Schneider and Mockus (1974) reported their failure to find a rural-urban difference in helping behavior they divulged that the proportion of helpers in urban locations exceeded the percentage in rural areas. McKenna and Morgenthau (1970) found urban level of helpfulness quite high, and negligible quantitative differences in behavior
between city inhabitants and townspeople. This trend for socially responsible behavior displayed by urbanites was also found by Clark and Word (1972), Franklin (1973), Merrens (1973), and Morgan (1973), all of whom reported significantly higher rates of helping in southern and midwestern urban centers as compared to New York City. Moreover, Forbes and Gromoll (1971) reported a significantly lower rate of helping response in the amount of letters returned from small towns than from either large or moderate-sized midwestern cities, and attributed their results to the condition of social anonymity; the benefactor and the recipient were strangers. Their statement is pertinent for ascribing the present findings. Perhaps the greater responsiveness ascribed to less urbanized residents would be realized only under the conditions of friendship, or in other words, in an explicit ingroup measure of altruism. Suggestive evidence for support of this attribution is supplied by Friedrichs (1960) and Bickman et al. (1973), both of whom stressed the distinction between within-group measures of altruism as opposed to assessment under conditions of social anonymity, and by Hackler et al. (1974) who found intimacy between neighbors as the necessary condition for positive attitudes toward involvement. Furthermore, as Friedrichs (1960) suggested, people reared in rural areas may have a maximum cohesiveness within the
family/friend reference group, which is likely to be balanced by a minimum cohesiveness with the stranger as outsider. Therefore, the lower overall rate of helping demonstrated by the Rural group subjects perhaps was due to the fact that the victim was a stranger, and as such, was not a member of their perceived ingroup.

There are certain factors, as possible determinants, that can be cited as an explanation for Friedrichs' (1960) suggestion of the minimum/maximum cohesiveness balance. These elements pertain to one's conception of social dealings. There are two orientations for prosocial behavior: reciprocity and responsibility (Berkowitz, 1972). Reciprocity is based on principles governing social exchange. Concrete in nature, as such it severely limits spontaneous helping. The reciprocity orientation calls for socially responsible behavior only toward people who comprise the intimate group; one's own family and staunch friends. Reciprocal interaction reigns toward all others, as outsiders. Additionally, the perception of greater social distance between the potential helping agent and dependent others is likely to result in help for those others only if there are personal benefits to be gained from the situation. In contrast, responsibility-oriented individuals help those in need; be it a stranger or one who is not personally liked. This orientation is
beyond the constrictions of social exchange and distributive justice considerations. When help is offered, the behavior is motivated by the more abstract ideal of freely providing service to another. Horowitz (1971) has reported that members of service-oriented groups were more likely to provide help to a stranger than the sample who chose social group membership. Also, differing orientations have been found between groups of adolescent subjects who differed on social class backgrounds, and their orientations accounted for differential helping rates (Berkowitz, 1968; Berkowitz & Friedman, 1967). These social orientations have been linked with differences in backgrounds as influencing one's social outlook (Berkowitz, 1972), and they could have prevailed between Residence groups. The reciprocal orientation serves to delimit rural from urban in a parallel manner as does social class (which was homogeneous for this sample), and could account for the fact that each of the Urban groups had nearly twice the number of subjects who helped the unknown victim than the Rural group.

It has also been found that other-than-first-born male high school students reared in rural areas had a significantly lower affiliative need than their urban counterparts (Query & Query, 1973). A high need for affiliation as a positive correlate of altruism for
college student females has been reported (Ribal, 1963), and it has been demonstrated that male college students high in n affiliation were significantly more likely to give help than low scorers (Schwartz, Feldman, Brown, & Heingartner, 1969). There was a significant inverse correlation across Residence groups between birth order and cognitive complexity in this study, but not with helping. If tested as a controlled variable rather than permitted to vary randomly, it is possible that this factor could be a determinant of rural-urban effects in altruism. However, the report that birth order was the only variable to be totally unrelated to helping among a number of biographical correlates (Latané & Darley, 1970) does not offer support for its influence in adult subjects, although Staub (1971b) found that oldest girls of kindergarten age helped significantly more than either youngest or middle children. The variable has not been treated separately from the number of siblings in the subject's family in other studies (e.g. Friedrichs, 1960), and is therefore incomparable.

The ingroup-outgroup concept seems to be pervasive as the explanation for differences in helping behavior between Residence groups. This formulation, with its accompanying ramifications, will be extended to the dimensions of simplicity-complexity as the complexity variable relates to
rural-urban diversity. The individual difference trait of cognitive complexity was found to be a potent determinant of helping responses.

Researchers who have examined population characteristics have been at a loss to account for variation in subjects' helping behavior between environmental areas. Statements for effects have been couched in amorphous expressions such as differing atmospheres (Schneider & Mockus, 1974) or unknown elements (Morgan, 1973) as moderating the relationship between community makeup and altruism. In this study, the cognitive complexity variable was shown as a specific factor for ascribing the lower frequency and magnitude of helping behavior offered by the Rural group. The complexity dimension emerged from the multiple regression analysis as the strongest predictor of helping among the five independent variables with both the scaled and dichotomized measures. The residence and complexity variables were found to be covariates, rather than independent factors, in the measurement of helping responses. When the subjects' responses were viewed in relation to complexity scores, the adverse effect of less complexity (as an inhibitor of socially responsible behavior) was revealed from both quantitative and qualitative analyses. Examination of the data from the dichotomized categories of Help vs. No Help clearly
established that an average degree of cognitive complexity was a necessary condition for the subject to provide help, while the complexity trait alone was not a sufficient condition to assure that helping action would occur. However, when the responses of the subjects who scored as within the range of complexity were separated into those who either provided help or did not help, the difference favoring the helpers served to suggest the overall impact of the complexity variable.

A major finding was that the Rural group contained a significantly higher number of subjects who scored as less complex on the BCS than either of the Urban groups, who were equal to each other. When it was seen that 88% of these Rural subjects who scored below the mean were also nonhelpers, the lower rate of help and degree of involvement of this group were accounted for. A further effect of the complexity variable was seen for all subjects who scored in excess of one standard deviation above the mean, in that all of them offered some kind of response to the victim rather than ignoring her. Also, the highest magnitude of helping response displayed by the Mainland group males was found to correspond to the highest complexity scores, which were attained by these subjects. The precise distinction obtained between Urban groups in the magnitude of help, afforded by the powerful multiple
regression analysis procedure, accounted for the significant positive correlation between subjects of Anglo-American origin and the scaled helping measure, in line with the predominant composition of the Mainland group.

The evidence for the effects of cognitive complexity as a variable affecting the likelihood of prosocial action confirms the insightful reasoning of Darley and Batson (1973), who suspected the influence of the stylistic tendencies, flexibility-rigidity, on helping. As part of the experimental design in the present study, this aspect of the general construct flexibility was a significant determinant in two capacities: as a predictor of whether or not the subject provided help, and in showing the consistency in mode of response by those subjects who offered prolonged aid. In regard to the latter consideration, restricted to the subjects who provided the highest magnitude of help, once again the Rural group significantly differed from the Urban groups in pattern of response. The Rural group mode was characterized by less use of the flexible forms and more use of the rigid form of response.

The results are consistent with empirical studies that showed the more complex subjects' orientation as one of appropriate social judgment and increased social effectiveness (Altman & Conklin, 1972; Barron, 1953b; Berkowitz, 1957; Bieri, Bradburn, & Galinsky, 1958; Sechrest & Jackson,
However, to show that more complex people are more prosocially inclined does not satisfactorily explain why they help more. Since cognitive complexity is associated with differing styles of behavioral response, three factors with a common thread could account for the findings. These interpretations are not mutually exclusive from those offered for the Residence effect, and thus provide a link with the obtained relationship between these variables. The explanations are: (a) a broader range of significant others in the perceiver's social world, (b) increased response versatility, (c) a constellation of personality components.

The ingroup-outgroup concept applied by Feldman (1968) to status disparity and differences in altruism is pertinent for the present findings. Within the general culture, the ingroup is characterized by a person's perceptual alliance with "people like me," as opposed to all others who constitute the outgroup. The more complex individual has a more expansive view of the world than the less complex, whose social world is constricted to more egocentric dimensions than the decentering (Piaget, 1947/1950) afforded by cognitive complexity. Therefore, the reference group encompassed by the more complex is likely to be more inclusive than that of the less complex, whose reference group tends to be more exclusive in correspondence
with lower complexity levels. For the latter subject, his reference group is more likely to be confined to family members or friends in the delineation of significant others who would be seen in terms of functional relevance. For the more complex subject, the more inclusive reference group of significant others would extend to the victim as a stranger, especially to a stranger who was within the common milieu of the college campus. Support for this attribution is provided by Vannoy (1965), who found the less complex to have high scores on the Social Distance questionnaire (after Triandis & Triandis, 1960).

As a second explanation, the more complex person has a wider range of response alternatives provided by his mode of processing information from the social environment (Crockett, 1965; Supnick, 1964). For the more complex subject, response variability permitted versatility of behavior in actively coping with the multifaceted environment created by the experimental demands and the intrusion of the victim. The more complex had the options of responding to the total environment, which required moving beyond the specified task requirements to the demands created by the emergency situation. The increase in complexity helped the individual to move out of a generalized univalence in impressions of others, and allowed for dissonance in ambivalent perceptions (Crockett,
1965). Therefore, a more refined choice of whether or not to help was available to the more complex. On the other hand, in the less complex subject's preference for simple phenomenal worlds and the tendency to eliminate impinging objects and events, by filtering out unwelcome or complex aspects of the environment, the emergency event represented unexpected and ambiguous stimuli in excess of the prescribed tasks. By psychological withdrawal of involvement, potential dissonance is controlled and the possibility of conflict is minimized (Crockett, 1965; Schroder, Driver, & Streufert, 1967). When the stimulus cues emanating from the situation which serve to activate conflict are prevented from becoming salient, it may be avoided, and conflict is a necessary condition for helping to occur (Latané & Darley, 1970; Schwartz, 1970b). Therefore, by the exclusion of the impinging stimuli (i.e. the emergency), the less complex subject was not likely to experience moral pressure to help, or to perceive the event as within the boundaries of personal relevance. A significantly higher number of less complex scorers ignored the victim (zero category response) than other subjects, and many needed prodding by the preset cues to mention the incident. Thus, response alternatives were not generated, but rather were prevented from entering the closed perceptual system. The statements made by these subjects attest to the lack of association between the
incident and the self, and in their seeming emotional flatness reflected a detachment from the situation in support of this attribution.

For a final ascription of why complex subjects helped more, there may be a configuration of social factors in the components of complexity that relates the dimension to the greater likelihood of altruistic action occurring between strangers. Becker (1950, 1957) developed the sacred-secular construct of differing personality types. On this continuum, Becker described the sacred type as "... a kind of rural and small town American version of nineteenth century Protestant Christianity" (1957, p. 146). The sacred type stresses ingroup loyalties and is reluctant to countenance change, in contrast to the secular type who endorses values emphasizing the desirability of viable change. The secular type is depicted as "emancipatedly socialized" (1950, p. 87), and is one who maintains an allegiance to a set of principles while he is free of prejudice. While Becker has indicated the distinguishing qualities of these constructs from other typologies, he has also admitted to similarities in components with those depicting folk societies and reciprocity vs. social ideal orientations. Friedrichs (1960) found that an orientation representing the sacred pole characterized the altruistic attitudes between friends.
Among the elements comprising this sacred orientation were rural rearing, theism, church attendance, ethnocentrism, authoritarianism, ingroup involvement, and sibling status. A substantial number of these variables inversely correlated with cognitive complexity and/or helping, and are indicative of the qualities and lifestyle of the less complex (Barron, 1953a; Berkowitz, 1957; Bieri, 1966; Sechrest & Jackson, 1961). Since 94% of the helpers were the more complex scorers, secular characteristics of the subject may directly influence aiding. It has been shown that people who are socially aware and active in social issues are responsive to change, and have adopted values that reflect the contemporary leitmotif (Block, Haan, & Smith, 1969; Haan, Smith, & Block, 1968). They have been found to be at the highest moral level (principled morality), rejecting both conservatism (intermediate, conventional level) and violent radicalism (low, preconventional level; Fishkin, Keniston, & MacKinnon, 1973). Additionally, a sense of social marginality has been found as a positive correlate of altruistic action (London, 1970), and of cognitive complexity (Barron, 1952, 1953a). In the relatively closed social network of self-contained environments, rural people traditionally have had an intimate identification with kin and a sense of belongingness, whereas mobility and transitory relationships are more characteristic of urbanites.
As predicted for the overload manipulations, it was demonstrated that exposure to an urban-like environment, even of a short duration, will result in adaptive strategies which have adverse consequences for prosocial involvement. The lower magnitude of help offered by overloaded subjects was responsible for the significant main effect. This effect was specifically reflected in the data by the finding that the lowest type of helping response, that of indirect reportorial help (category 2), was provided by a considerable number of overloaded subjects while not at all by subjects who were not overloaded. The overall significant difference between treatments was consistent with Milgram's (1970) theory, and corroborated the results of previous researchers who directly manipulated the variable (Krupat & Epstein, 1973; Sherrod & Downs, 1974). However, it was revealed by the significant Overload by Residence interaction that the treatment was effective only for the Urban groups. The main effect was totally accounted for by the substantially higher degree of response and greater number of helpers supplied by the Urban groups in the Low Overload level. Helping behavior provided by the Rural group did not differ between the two overload conditions, and a nonsignificant reversal in decreased magnitude of helping and number of helpers was seen in the Low Overload condition. It was revealed that there were a significantly
higher number of less complex subjects in the Rural group than in either of the Urban groups, and correspondingly, these less complex subjects were more highly represented in each overload condition. From the analyses of helping responses in relation to BCS scores, the influence of complexity was demonstrated. It was found that depressed BCS scores served to further extend the inhibiting effects of stimulus overload on helping behavior for subjects from all the groups. However, only the less complex subjects from the Rural group were similarly inhibited from responding prosocially when not overloaded.

The situational overload variable was a significant predictor of helping behavior. However, overload was found to be subsidiary in nature and strength of contribution to the antecedent factors of residence and cognitive complexity, as indicated by the multiple regression analysis. The effects of residence on overload were found to be related through cognitive complexity, in an interdependence of interacting elements which link personality and situation as concomitant predictors of helping behavior. Nevertheless, it was unexpected to find that the demographic circumstance of rearing for the Rural group resulted in differential response in Low Overload; that the overload manipulations were singularly ineffective for the Rurals among the residence groups. To what reason can we ascribe
the significantly lower helping displayed by the Rural group than that of the Urban groups in the Low Overload condition?

The failure of the treatment for the Rural group is somewhat enigmatic, but it could be explained in the following manner. It seems reasonable to assume that the base rate of helping was reflected in the Low Overload condition. Exposure to stimulus overload was expected to inhibit prosocial response. The helping behavior of the Urban groups was significantly depressed in the High Overload condition in comparison to Low Overload, while there was not a significant difference for the Rural group subjects between the two overload levels. This lack of a significant difference between the two levels may have been due to the fact that the base rate of helping for the Rural group was so low that manipulations designed to decrease or inhibit this behavior further were ineffective. In other words, there might have been a "floor effect" operating for the Rural group. Credence is given to this explanation since significant differences in less helping were found between the Rural group and Urban groups in Low Overload where there was no difference in task performance, and significant differences in task performance were found between the Rural group and the Urban groups in High Overload where there were no differences in helping. Less complexity affected the Rural group subjects similarly in both overload conditions. These
less complex subjects did not help, regardless of being overloaded or not, in contrast to the less complex subjects in the Urban groups, who were fewer in number and whose helping was less only when overloaded. Among the less complex, the complexity variable was shown as the dominant influence in determining whether or not help was given. Whereas overload served to restrict response, less complexity served to restrict response alternatives, superseding overload treatment.

There are consequences for the altruism research in the finding of the significant Overload by Residence interaction, which serves to illustrate the importance of the use of multiple independent variables and dependent measures in experimentation. On the one hand, it would appear from a one-way analysis of the overload factor (Sherrod & Downs, 1974) that all groups demonstrated restricted involvement as a result of being overloaded. On the other hand, the influence of the overload variable was undermined from the results of the dichotomized dependent measure, as a significant difference in the number of helpers between the conditions was not obtained. Therefore, in testing a single independent variable or employing just a dependent measure of absolute differences, the effects of the residence variable on overload would have been masked.
As was expected, sex differences were not found for any results in either the scaled or dichotomous helping measures. The insignificant level of correlation and minimal strength of contribution to the variance is reflected in the multiple regression analysis, a powerful statistical tool due to the use of a great deal of data information. It would seem that the absence of sex effects are generally predictable when the sex of subject variable is subjected to the following considerations: a relatively homogeneous subject sample, a behavior that is free from sex-linked perceptions and expectations, and a situation in which costs of involvement are low. This reasoning conforms to Deaux's (1972) theory of the importance of situational weighting components, and Latané and Darley's (1970) summary conclusion that sex is not a very important determinant for either low-cost helping or when reportorial means are available. The findings in the present research are in accord with those of the 26 previous studies cited earlier, in which no sex differences between potential benefactors were found.

There was, however, a difference between the sexes obtained within the prolonged helping category on the form of response offered the victim. Seven male subjects, and no female subjects, initiated action by responding in the flexible active mode (response 5b). At this finer level
of response gradations, in tapping styles of helping, opportunities for cultural expectations to come forth were present in the situation. Since this form of response was evoked exclusively in males, the finding reflects the influence of sex-linked action modes as a residue of arbitrary socialization practices in which males are trained to be more assertive.

Tangentially, some variability between the sexes was evidenced in task performance scores. The differences favored females in the overload treatment and favored males when not overloaded. Males have been found to achieve higher scores with this type of stimuli when the matrices were administered as a power test rather than as a speed test (Wilson, Ashton, Johnson, Mi, Rashad, De Fries, McClearn, & Vandenberg, in press). For the overloaded condition in which speed was primary, it would appear that differences in attention could account for the results. The sex effects obtained when the BCS was subjected to analysis as dependent measure served to illuminate the influence of complexity in helping responses. The Mainland males demonstrated a superior degree of complexity to Rural group subjects of both sexes and to Honolulu males, while their scores did not differ from females of the other groups. This finding is self-explanatory, as the pattern of helping responses provided
by subjects of both sexes in each Residence group followed the same rank order as that of the BCS measure.

The cognitive interference variable, as measured by the Stroop Color and Word Test, failed to demonstrate predictive power of helping behavior with either dependent measure. Paradoxically, there was a total lack of value for this variable as opposed to the strong significance of cognitive complexity, and both were representative of the same trait of flexibility. This finding is reason for stimulating awareness of the multidimensionality of such broad general constructs as flexibility-rigidity, as well as for exercising caution in assuming the generality of even an aspect of flexibility as signifying unrestricted "flexibility" for that individual across behavioral domains. However, flexibility within the helping domain was demonstrated by the subjects' dominant use of the flexible forms of response in offering prolonged help to the victim. When it was found that the Rural group subjects who offered prolonged help were an exception, as they used the rigid form more often than other forms in comparison to self and in contrast to the Urban groups, this led to examining the nature of the responses (recorded by the confederate and recounted by the subject during the postexperimental discussion). Although the statements certainly fit the rigid category as it was
operationalized, the responses had a positive quality. The directions given to the victim for proper treatment were based on knowledge gained by direct experience, and a pride in that knowledge was reflected.

The biographical variables that correlated with either measure of helping were few; only five of the 22. However, this number of correlates is encouraging when judged in relation to other reported research. Darley and Latané (1968) for example, reported a significant relationship for just one of 16 relevant subject background factors, and this variable was the size of the community in which the subject grew up, which turned out to be of consequence indeed. Therefore, there are possibilities that where feasible, if these variables are treated as controlled factors, further relationships may be discovered.

The number of organizational affiliations of the subject was the sole factor to correlate with both dependent measures and the complexity scale. The greater the subject's involvement in outside activities, the more likely it was that he/she would help the victim. This finding is logical, especially in its strong correlation with complexity (beyond the .01 level), for the more complex subject presumably has the ability and inclination to handle varied and complex experience, as represented by multiple memberships. The positive influence of the
variable was found by Weiner (1974), in whose sample of known helpers, service-oriented affiliation was a key factor.

A strong inverse relationship was found for the number of siblings in the subject's family and both measures of helping, while the factor did not significantly relate to complexity. In addition, each subject who was an only child provided prolonged help. Although the superior performance and success of only children and first borns is publicized in the career world (e.g. astronauts and U.S. presidents), it is possible that in general, the sibling factor has been confounded with the need for achievement, which has been found to correlate negatively with altruism (Ribal, 1963; Schwartz et al., 1969). Only one study in the altruism literature offers support for the current finding, and it is only partial substantiation. Staub (1971b) obtained a strong inverse significant effect for girls in helping behavior but found no differences in sharing behavior, while for boys, family size was unrelated to prosocial acts. Handlon and Gross (1959) reported no differences in altruism between only and other-than-only children, while in two studies a significant relationship has been found which favored more prosocial response by subjects from large families than by subjects from small families (Ugurel-Semin, 1952; Weiner, 1974). Latané and
Darley (1970) found a nonsignificant but positive correlation for females from large families and the likelihood of reporting the contrived "epileptic seizure." This finding leads to the suggestion that perhaps the action required in the situation is the determinant. In the case of an epileptic seizure, or other instances of unusual happenings, a person from a large family would probably be more likely to have had more and similar type of experiences. It might also be that this factor works in different ways for different people from both large and small families, depending on the positive or negative quality that this experience has had for them as individuals. It might also be that this factor is not a significant determinant of altruism. From this generating of proposed alternatives, it would appear that the size of the subject's family is a factor worthy of closer scrutiny.

The finding that age was a positive correlate of whether or not the subject would help (while not significantly related to the degree of help provided) is supportive of previous research findings. Evidence for a developmental increase in altruism has been obtained (e.g. Handlon & Gross, 1959; Midlarsky & Bryan, 1967; Staub, 1968). However, the factor's significant correlation with complexity is contrary to the results of Altman and Conklin (1972), who found that cognitive complexity decreased with age in
their college student sample, but in line with the conflicting finding that college students and older adults showed a clear and somewhat dramatic increase in complexity from junior high and high school age (Lowe & Ritchey, 1973). It is possible that the Altman and Conklin sample was homogeneous in experience, and of wide age range within the group, as no identifying information accompanied the reported results.

The region in which the subject grew up, ethnic origin, and independent versus living at home factors all correlated positively with degree of help the subject was to offer the victim, and strongly with complexity scores, while not acting as determinants of whether or not the subject would help. When each of these variables was expanded into more precise delineative categories than the dichotomized form, relationships were absent for all the factors. Regional differences in personality have been related to psychological dimensions associated with degree of industrialization and population density (Krug & Kulhavy, 1973), and a general creativity pattern was identified for subjects reared in the northeastern U.S.A. Region may reflect the unparalleled pace of the eastern seaboard, and thus account for the eastern reared subject's propensity for the greater magnitude of help, although this explanation is incompatible with Milgram's (1970) ascription for the effects of the pace of east coast urban life. The strength
of the correlation with complexity scores is consistent with the complexity research evidence that more flexible subjects handle more stimuli more efficiently and easily, and with Darley and Batson's (1973) suggestion that flexibility in cognitive style is reflected in kinds of help given rather than in whether or not help is given.

Likewise, the greater involvement of Anglo-American subjects appears to be a function of the higher level of complexity found for these subjects than for those of other national origins. This interpretation is supported by the comparable ethnic composition of the Rural and Honolulu Urban groups, in which subjects of Japanese ancestry were predominant and equal in number (N = 16 in each group). Subjects of Anglo-American origin were most scant in the Honolulu group among the residence levels. It was shown by the analyses that there was no difference in the frequency of helping responses, as the number of helpers in the Honolulu group was equivalent to those in the Mainland group. Rural subjects, regardless of origin, helped less. When the data was further delineated into proportions of responding subjects on the basis of ethnicity, a balance was revealed, in pluses for Honolulu and minuses for Rural, which cancelled each other out. The finding of more complexity for Anglo-American subjects fits the data on acculturation patterns of varying ethnic
groups (e.g. Fenz & Arkoff, 1962; Meredith & Meredith, 1966), in which some residual effects from cultural origin are retained although reduced over generations. In this study, there was no control for generation level in the United States beyond the requirement of American birth for the subjects. Connor (1974) found that subjects of Japanese-American origin were at the normative level on personality patterns, and additionally, did not differ from Caucasian subjects within the tested sample in some characteristics. However, they did differ in holding somewhat more conservative and conventional values and by expressing more of a preference for order than the Caucasian group. Although these factors could account for the nuances of difference found in complexity scores between Urban groups, differences in opportunities for experience is suggested as the probable explanation. As the primary attribution for the findings of more and less complexity between Residence groups, this socialization factor will be discussed separately.

Independent living arrangements can be related to the quality of independence in general. As a strong positive correlate of cognitive complexity, it is consistent with the preferences, lifestyle, and independence of judgment depicting the more complex. As a spirit of adventuresomeness, independence has been found by London (1970) to
characterize those who were motivated to participate with intense involvement in the rescue operations of Jews during World War II. The subjects in this sample who lived independently responded to the emergency event to a greater degree than those subjects who lived with their parents, while not significantly differing from the others in the decision to provide help.

The eight Barron Complexity Scale items that correlated at a significant level with helping reflect the following: subjects' preference for stimuli that are less structured, balanced, and more open-ended (items 25, 27, 42, 49); attitudes of social concern (item 48) and of endorsing viable change (items 13, 39), and rejection of formalized religion in identifying with external sources of structure (item 3). In relation to the item analysis, the preference for externally given structure, and the concomitant dependence on external social cues, represent the salient elements that comprise the lowest level of conceptual belief systems in the 4-system range from concreteness to abstractness formulated by Harvey, Hunt, and Schroder (1961). In relation to the subjects' scores, since both Urban groups similarly contributed to the item correlations indicative of more complexity, the reflected preferences for less structured stimuli and rejection of organized religion dampens the likelihood that differences in subjects'
national origin contributed meaningfully to complexity scores.

The Helping Process

The discussion has been focused on the specific effects that acted to facilitate or inhibit the incidence of prosocial behavior. Additionally, there are factors to be considered which involve the helping process itself, in relation to the cognitive and motivational forces in play for the subjects in general. Altruism and helping behavior is an issue for research because of the frequent unresponsiveness of the innocent bystander to an emergency event. True to form, in this study there were comparable proportions of helpers (51%) and nonhelpers (49%). When viewed in terms of probabilities, there was almost equal likelihood that the victim would not be aided as the likelihood that she would be given assistance.

Outside of the experimental variations, given a low-cost helping situation in which the subject and the victim are strangers, and the help is unsolicited rather than requested, what determines whether or not the victim will be helped? Subjects' differing responses to the same situation can be explained in alignment with the various decisions the observer must make before he can help. In the decision-making model formulated by Latané and Darley (1970), there is only one set of choices in the series that
leads to prosocial action. In order to help, first the subject had to notice the incident, then define the situation as one that called for help, then decide that he himself was responsible for taking action, and finally, choose the type of action and implement it. At each stage of this process, it was possible for the subject to form a definition or to make a decision that effectively removed him as a potential helper.

As it was ascertained that each subject had perceived the victim's fall, and had interpreted the episode as one in which she could use help, the subject's decision-making had sequentially progressed to the third step in the process; whether or not to assume personal responsibility. At this point there were several courses open to the individual: (a) resolution of conflict in a decision to help, (b) no conflict, (c) cycling in conflict, and (d) resolution of conflict in a decision not to help. Concomitantly, there were motivational factors that entered into the cognitive appraisal and affected the decision. It was probable that one of these factors was the evaluation of one's competence in handling that situation. The options provided to increase perceived control of the environment were instituted to diminish the possibility of feelings of inadequacy for the subjects.

An emergency is an unexpected event, and there is
little time for deliberate, rational appraisal. If action is to come, it will usually be swift, positive action, for if the subject has not helped by the time 60 seconds has elapsed, it is more than likely that help will not be forthcoming (Latané & Darley, 1970; Latané & Rodin, 1969). Therefore, the subjects who assumed the responsibility and then decided to help did so quickly. As confirmed by their postexperimental statements, human needs were present in the situation, and these took precedence over attention to objects. The victim's welfare became the primary focus in the subject's commitment to another and adherence to personal values. Altruistic motives were triggered by the awareness of someone in distress. The prosocial action exhibited by these helpers can be viewed as an individual's readiness to respond, which was activated by the salient cues in the situation.

As a lone observer to the emergency incident, the subject's responsibility was high. In order for helping response to occur, it would have to come from him(her). However, although the onus of responsibility was implicitly on the subject, no hints, expectations, or explicit rules were expressed by the experimenter to which he might conform. His role as experimental subject did not demand the ascription of responsibility to himself. Also, although the costs of intervention were low, in risk of
danger or personal harm, it was likely that anticipated costs were perceived in the unknown amount of time and effort that might be entailed. Moreover, the victim did not request help, which would have served to focus responsibility and provoke pressure for a moral decision. In addition, the social costs of not helping were also low. The intrusion of the victim was presumably in the framework of a casual encounter, under chance circumstances. As strangers, there was no expectation of future interaction. The subject was free from formal supervision during the experimental session, and was unlikely to foresee any reproach for not helping from anyone outside of the encounter. Furthermore, what rewards were there for the subject who decided to become involved? Extrinsically, perhaps a hurried "Thanks." Therefore, all these factors would serve to motivate the decision not to assume responsibility and thus eliminate conflict by inhibiting the empathic arousal inherent in conflict. As the episode occurred in the peripheral area of the experimental room, the subject could psychologically withdraw from involvement by turning his head away and focusing his attention in front of him. Psychological withdrawal provides insulation from unwelcome inputs by avoiding further exposure to the distressed person. Physical escape was also provided by the victim's initiation of procedures for leaving the room
after the specified 60-second interval had elapsed. The majority of subjects who ignored the victim seem representative of this decision to deny, rather than assume responsibility, by avoiding it. The apathy, indifference, lack of concern for others, and minimizing of personal responsibility indicative of some passive witnesses lack of reaction to the Genovese murder appears as an apt description. From the comments made by these subjects, feelings of guilt or self-blame for inaction would have been evoked only in the case of either anticipated negative reactions from others or if the subject had been the causal agent for the accident. In any case, the primary motivation was for noninvolvement.

Few subjects who chose to ignore the victim were visibly upset and openly regretful at not having helped, in contrast to most subjects who verbally reacted but did not act. Among these latter nonresponding subjects, there were those who decided not to respond, and those who did not reach a decision and therefore inadvertently committed themselves to inaction. As the emergency occurred during the Retrial sequence of exposure to the stimuli, the subject had experienced closure in regard to item novelty as well as having fulfilled the explicit demands of the task requirements. Attention to the repetition sequence was presented as an option which served to keep the subject
occupied, maintain the credibility of the emergency as a real happening rather than as part of the experiment, and provide overloaded subjects with a tension-reducing mechanism. By the means of the retrial, situational impediments which inhibit helping response were mediated, and the choice of response was not shaped by potential artifactual determinants (i.e. demand characteristics, evaluation apprehension). For the subjects who cycled back and forth in conflict, they appeared aware of their responsibility and had intended to assume it. However, the pull of countervailing motives acted as an immobilizing force. The individual remained in a state of vacillation rather than having reached the decision point to intervene, which resulted in no help for the victim. These subjects' statements were attestations to the intentionality of action which was sidestepped by continued indecision.

Other subjects were apparently caught between two negative alternatives, and resolved the avoidance-avoidance conflict with a decision not to help. On the one hand, they experienced empathic distress at letting the victim moan in pain, while on the other hand, they were concerned with doing the best job they could in order not to let the experimenter down (as they perceived it). Like some of Darley and Batson's (1973) seminarians, these subjects were in conflict between responsibilities. Empathy, as a
necessary condition for identifying with another's pain, is not sufficient for helping action (see Milgram, 1963). Empathic arousal lets you know how you feel, but it doesn't serve to let you know what to do. The coalescence of cognitive and affective processes are the components for altruism. For these subjects, the motive strength toward self prevailed, and therefore, by cognitive methods, the subject could deny his responsibility to the victim, and thus choose to avoid involvement without self-censure. Derogation of the victim is a way of shifting responsibility, for if the potential helper has convinced himself that the victim is herself responsible for her plight, then he is not. This belief in a "just world" (Lerner & Simmons, 1966; Lerner, 1970), in which the victim got what she deserved and deserved what she got, was exemplified by the subject who perceived that the victim was either drunk or drugged at 8:30 a.m. and who announced that those circumstances precluded his involvement. Another way to deny responsibility to the victim is to decide, based on subjective motives, that help is really not needed after all. Perceptual distortion can work to neutralize the felt pressure to intervene. A few subjects reported that they would have helped if the girl had let them, but that she had fallen down, gotten up, and had left all in a few seconds without giving them a chance. By rationalization,
the subject can redefine the situation and undermine either its seriousness or the consequence of not helping. In the case that the subject asked the victim if she was okay, the victim ambiguously responded that she didn't know and then continued to moan. No further reactions followed on these subjects' part. Another motive for avoiding involvement could have been the threat of the victim's dependency to the subject's behavioral freedom. In the victim's need for assistance, a restriction of the subject's independence was implied (Berkowitz, 1973) which aroused psychological reactance (Brehm, 1966). Resenting this felt obligation to help, the subject had an increased desire to attend to the tasks, which is what he would not have been able to do if he provided aid. Several subjects reported that they did not help because they were task-oriented, and whether or not they had need for the retrieval, attention to the tasks was what they were supposed to be doing. In the decision-making process, there is a dynamic network of factors operating to reduce the likelihood of helping behavior.

Implications and Conclusions

Differing patterns of behavior were evoked by the emergency episode as a result of the experimental treatments. Both the demographic residence and situational overload variables affected helping. However, the
antecedent residence factor was significantly related to prosocial action through the dispositional measure of cognitive complexity, and the dominant differences between the Urban and Rural groups were due to variations in degree of complexity. It was found that the responses of the Honolulu group subjects reflected the experience of the urban mode of life, virtually not differing from the Mainland subjects. The insularity of island living for the Honolulu Urban group apparently was superseded by the cosmopolitan atmosphere and variety of experiential opportunities. Nuances of difference displayed by the Mainland reared subjects, in increased intensity of involvement, would be expected by the expanded nature of their environment. In contrast to the Urban groups, the Rural group subjects mode of response was characteristic of an insular lifestyle, in terms of restricted exposure to discontinuities in social relations and the resulting cohesion of intramilieu versus intermilieu interaction. The results of this study were complex but consistent, and the empirical data offer no support for the prevailing notion of superior rural values when the situation demands helping a stranger in need. The homogeneity of a college student sample attests to observed differences between groups as due to a heterogeneity of backgrounds.

The finding that the Rural group was less complex than
the Urban groups is aptly attuned to the hypothesis of Barron (1953a) and the empirical results of Sechrest and Jackson (1961): the development of complexity is a function of the complexity of stimuli afforded by family background experiences. In line with the developmental cognitive approach for the acquisition of such conceptual tools as cognitive complexity followed by Bieri (1966), the low rate of helping behavior provided by the Rural group is attributed to circumscribed patterns of social-perceptual learning during the socialization years. Evidence exists that variations in cognitive styles are related to differences in family experiences, and that stylistic tendencies are end-products of particular socialization processes (Bieri, 1966; Witkin, 1967). Complexity, as a social cognition, is based on perspectives evolved through the environment. On the developmental level, experience with more and different kinds of social behavior yields greater differentiation and the social ability represented by the dimension. Different rates and types of interaction have been found to be a determinant of complexity (Bieri, 1961; Crockett, 1965). A personality dimension associated with less effective role interaction has been attributed to restricted opportunities for interaction as a result of relative social isolation due to demographic origin (Krug & Kulhavy, 1973). Additionally, the results of
experimentation (McMahon, 1966) have provided suggestive evidence that the more complex environment fosters an "outgoing" attitude to the external world (Berlyne, 1968, p. 196).

From the findings of the research cited above, it follows that the stimulation provided by the environment, in either its constancy or variegated quality, and the quantity of available experiences, as restricted or extensive, would account for the differences in levels of complexity accrued during the socialization years. An environment which by its sameness breeds harmony within, lacks the dynamic qualities that foster the evolvement of the increased differentiation necessary for coping with multifaceted social aspects. As Wirth (1938) noted, the generically attractive thing about the city is that it seems to be an optimum center of choice. Urbanites have had opportunities for broader exposure to varied, complex stimuli and social experiences. This has led to expanded horizons and to functioning in a larger field. In contrast, persons reared in smaller, less dense, more homogeneously populated and self-contained communities have had a more restricted sphere of experiential exposure by the very nature of their demographic circumstance.

There appears to be means for extending the experiences that foster prosocial responsiveness between strangers
within the confines of a given environment. Role-playing and responsibility training are two such techniques. These methods are directed to the development of a growing person's resources in an ecological perspective. They could serve to make altruism more salient and to provide practice for promoting altruistic values.

The technique of emotional role-playing is considered effective for attitude and behavior change (Sarbin, 1964), and for increasing tolerance and social maturity (Clore & Jeffery, 1972). Reciprocal role-taking is thought to contribute to the simultaneous experience of empathic arousal and awareness of consequences (Hoffman, 1970, 1974), and as such, holds promise in its potential for the inter-penetration of affect and cognition as prosocial forces. Recent research has provided suggestive evidence that the developmental process for the capacity to grasp another's perspective starts at a very young age (i.e. one year; e.g. Bell, 1970). Perceptual role-taking ability has been found in 3 1/2 and 4-year-old children (Fishbein, Lewis, & Keiffer, 1972; Shatz & Gelman, 1973). There have been reports of role-playing as an intense experience and with lasting effects for kindergarten children (Staub, 1971b) and for third grade youngsters (Peters, 1971). Similar results have been reported for adults (e.g. policemen, "Operation Empathy," 1969; Griffin, 1960). Clore and
Jeffery (1972) found that role-playing a disabled person in a natural social environment had immediate and long-term effects on interpersonal attitudes toward the disabled. In addition, similar effects were shown for college student subjects who did not experience the role directly but rather, vicariously, by watching. As these authors suggested, it seems possible that a backlog of varied role experiences can be developed "artificially" by role-playing and allied methods (p. 111).

Responsibility training by socializing agents can serve to encourage the development of an autonomous individual, and autonomy is the element which distinguishes the highest level of principled morality from the intermediate level of conventional morality (Durkheim, 1925/1961; Kohlberg, 1963; Piaget, 1932/1948). Responsibility training provides children with experiences in assuming this focal role. It is also a method for imparting prosocial rules for internalization, which are apt to be neglected in the emphasis on prohibitions (Staub, 1971a). There is some research evidence for the positive effects to be accrued by implementation of this socialization mode. Whiting and Whiting (1969) measured altruism among children in varied cultures, and reported that children behave more altruistically in those cultures in which important tasks are assigned by mothers in the course of
the child's socialization, in contrast to cultures in which youngsters are assigned less responsible or fewer tasks. Staub (1970) found that by putting kindergarten and first grade children in charge of things in an experiment significantly enhanced helping behavior to another child in distress. Similar results for the positive effects of focusing responsibility have been reported for adult subjects. When Tilker (1970) "forced" subjects to act in a socially responsible manner, by specifically making them totally responsible for the victim's welfare in a Milgram-type obedience design, these subjects were the only group in which all subjects stopped the experiment. Geer and Jarmecky (1973) likewise focused responsibility on subjects for terminating shock to a victim and confirmed Tilker's results.

Both of the above methods could act to nurture a concern for others, and thus perhaps help to increase the number of socially responsible citizens. The results of early experimental studies have provided evidence that children can be taught to behave altruistically (e.g. Midlarsky & Bryan, 1967; Rosenhan & White, 1967). It appears that, as Berkowitz (1973) stated, "If we want greater helpfulness, we probably have to teach people that this is desirable behavior, have them rehearse this action, and reward them when they do assist others" (p. 316).
It can be concluded that there is a complex interplay of cognitive factors and motivational forces, arising from the person and the situation, which comprise the elements that work to determine whether or not the subject will help the victim. The emergence of a personality trait variable as a strong predictor of helping adds to the constellation of internalized subject dispositions found by previous researchers as positive and long-range correlates. This finding conjoins with the growing body of evidence that individual difference personality variables exert their influence as determinants of altruism. Rather than the overemphasis of situational specificity as the determinant of this moral behavior, it would appear that the readiness to respond is the contribution of personality, while the situation affects its activation, and that both claim an interdependency with the demographic aspects of a potential helping agent's experiential world. Further research is warranted for continued exploration of the rural and urban reared person's orientation toward other-directed altruistic acts.
Additional residence criteria were established a priori and specified as follows: (a) the subjects were to be American born as well as reared, (b) comparability of type of community if the subject had moved between the ages of three to 16 years, (c) subjects classified as Mainland Urban were to have resided in Hawaii less than three years. There were 42 persons either foreign born or mainland born who had migrated to Hawaii during their growing up years. Another 12 students did not schedule appointments or could not be contacted, while seven potential subjects either did not show up for the second session or cancelled appointments. In addition to these 61 people, four students who met the criteria served as pilot subjects for pretesting each manipulation condition.

There were five subjects in the No Help category (response 1) who expressed a pervasive concern about the victim's well-being throughout the debriefing period. Before these subjects left, they were introduced to the victim, who assured each one that she was fine.

Data assessing the magnitude of helping responses has been subjected to parametric methods of analysis (e.g. Darley & Batson, 1973; Harris & Huang, 1973a, 1973b; Kazdin & Bryan, 1971; Schwartz, 1974; Thompson, Stroebe, & Schopler, 1971).
Darley and Batson (1973) provided a systematic check on the validity of using analysis of variance and multiple regression analysis on their ordinal data. They calculated Kendall rank correlation coefficients between the helping scale and the five independent variables. As expected, \( \tau \) approximated the correlation quite closely in each case and was significant only for the variable effects obtained in both of the parametric analyses. Therefore, the legitimacy of the use of parametric analyses is statistically substantiated.
Appendix A

Background Information

Please answer all the questions that are applicable to you. The information is confidential, and for research purposes only. Comments on any question are welcomed, and can be written on the back of the page.

Name

Age ____  Sex: Male ____  Female ____

Address ______________________ Zip Code_____

Phone Number _________________

For how many years have you lived in this general area? ____

Place of birth ____________________________

City or Town  State  Country

Did you grow up in the same city or town in which you were born? Yes ____  No ____. If answer is YES, skip down to the asterisk (*) and continue. If answer is NO, please answer the following questions:

1) State and city or town in which you grew up ______

City/Town ____________________________  State

2) How did the population of the community in which you grew up compare to your birthplace?

Smaller ______  Larger ______  Same_____

3) At what age did you move? ______
4) If you have moved more than once please specify:
   a) Number of times you have moved
   b) Names of cities or towns in which you have lived:
   c) Indicate which of these places you would most consider to be your home

*If you were not born in Hawaii, how many years have you been in Hawaii?

Marital status: Single ____ Married ____ Other ____

If you do not live with your parents, how long have you lived away from home?

Please specify family religion

Do you attend church regularly (once a month or more)?
   Yes ____ No ____
   If answer is NO, does religion play a part in your life? Yes ____ No ____

As a student, what is your major field of study?

Are you employed? Yes ____ No ____
   If answer is YES, is your work related to your field of study? Yes ____ No ____

Are you a volunteer member of any organization? Yes ____ No ____
   If answer is YES, please name them

Please list any skill or talent that you may have

How many brothers do you have? ____ Sisters? ____

Please list the ages of all the children in your family, including you (and please circle your age), in descending order from the oldest to the youngest. ____ ____ ____
Have relatives other than your parents and brothers and sisters lived with you when you were a child? Yes ___  No ___. If answer is Yes, please specify (e.g., aunt, grandfather, cousin, family friend, etc.).

Where was your mother born? ___________ City or town ___________ State/Country

Is your mother's ethnicity: American Indian ___  Black ___  Caucasian ___  Chinese ___  Filipino ___  Hawaiian ___  Japanese ___  Korean ___  Samoan ___  Thai ___  Other ___

Mother's educational level (highest grade completed or diploma or degree) ____________________________________________________________

Mother's occupation ______________________ (If retired or deceased, please state past occupation)

Where was your father born? ___________ City or town ___________ State/Country

Is your father's ethnicity: American Indian ___  Black ___  Caucasian ___  Chinese ___  Filipino ___  Hawaiian ___  Japanese ___  Korean ___  Samoan ___  Thai ___  Other ___

Father's educational level (highest grade completed or diploma or degree) ____________________________________________________________

Father's occupation ______________________ (If retired or deceased, please state past occupation)

Have you formulated a philosophy of life? Yes ___  No ___. If answer is Yes, please explain.
Appendix B
Verbatim Procedural Instructions Given
to Subjects in Experimental Session

High Overload Condition

WE WILL GO OVER THE FOLLOWING INSTRUCTIONS TOGETHER.

1. A series of slides will be projected on the screen. Here is a sample of the kinds of patterns you will view (a sample of Raven's matrices followed).

2. At the same time, you will have a set of cards that corresponds to the patterns that you see on the screen. Your first task is to pick the appropriate pattern that fits the blank space and to record the number of the correct answer on the answer sheet provided on the next page. Pictured below is the set of patterns that corresponds to the slide pictured above (the correct answer was supplied for the sample design). Is this task clear to you? Please continue to read.

3. While you are viewing the slides and recording the correct pattern, you will also hear a tape recording of a series of three digit numbers, such as 724, 634, 763, 420, 586. Your task is to record on the answer sheet any set of three numbers that contains the number six. When you hear the number six in any of the three digits of a set of numbers, you record that set of three numbers. Is this task clear to you? Please continue
to read.

4. To **sum up** the preceding instructions, your first task is to look at the slides projected on the screen and record the number of the correct pattern from the cards in front of you. **Simultaneously**, your second task is to listen to the numbers from the tape and record any set of numbers that contains the number six in any of the three digits. Are there any questions? Please continue to read.

5. **Further instructions:** Once I have focused the first slide, the projector functions automatically. Therefore, the series of slides will progress without your manual assistance. When the total series of slides have been shown, and the sets of numbers have been heard, a slide will be projected that reads RETRIAL. Then, at the same rate of speed as before, the slides and the numbers will be repeated for a second time. This is an opportunity for you to correct for accuracy of your recorded answers or to pay attention to any pattern or numbers that you may have missed. When the series of slides has been shown for the second time, another slide will be projected on the screen instructing you to turn off the projector and proceed to answer the post-experimental questionnaire. This questionnaire is to be found directly following the answer sheet in your materials. For the questionnaire, it is asked that you check one of the lines that **best** expresses how the various stimuli
and tasks seemed to you. The questionnaire is to be filled out after the retrial, when you have turned the slide projector off. About this time I will return from the room down the hall where I will be working for a brief discussion and collection of the materials.

Also, since the equipment is automatic, the slides will just continue with one retrial following another unless you turn off the projector manually (by pushing the OFF button) after one retrial. It is not essential for you to remember to turn off the tape, as the numbers will not be repeated for more than one retrial. It is necessary for you to start the tape recorder.

The starting signal for this experiment will be the word BEGIN. The signal will be preceded by a gestural cue in order for you to get ready. As I say the word Begin, please push the third button from the left on the tape recorder which is marked PLAY so that you will hear the numbers and see the slides and be able to record both. Please locate the PLAY button on the tape recorder now.

If the procedure and your tasks are clear to you, I will focus the first slide. When I have it focused I will hold up my index finger as the cue for you to get ready. Then, as I say BEGIN, turn on the tape recorder PLAY button and start your tasks.
Low Overload Condition

WE WILL GO OVER THE FOLLOWING INSTRUCTIONS TOGETHER.

1. A series of slides will be projected on the screen. Here is a sample of the kinds of patterns you will view (a sample Raven's matrices followed).

2. At the same time, you will have a set of cards that corresponds to the patterns that you see on the screen. Your first task is to pick the appropriate pattern that fits the blank space and to record the number of the correct answer on the answer sheet. Pictured below is the set of patterns that corresponds to the slide pictured above (the correct answer was supplied for the sample design). Is this task clear to you? Please continue to read.

3. After you have viewed the series of patterns, then a slide will be projected on the screen which reads, PLEASE TURN OFF PROJECTOR BEGIN TAPE RECORDER. You need only turn off your attention from the slide projector, not any switches. Please locate the PLAY button which starts the tape recorder now. From the tape you will hear a series of three digit numbers, such as 724, 634, 763, 420, 586. Your second task is to record on the answer sheet any set of three numbers that contains the number six. Whenever you hear the number six in any of the three digits of a set of numbers, you record that set of three
numbers. Is this second task clear to you?

4. When the sets of numbers has been completed, you will hear the announcement RETRIAL on the tape recorder. This is an opportunity to correct for accuracy of your recorded answers or to pay attention to any numbers you may have missed.

When the numbers have been repeated for the second time, you will be instructed to view the slides for a second time. At the end of this RETRIAL of the slide patterns, then a slide will instruct you to PLEASE TURN OFF PROJECTOR AND PROCEED TO ANSWER QUESTIONNAIRE.

5. The post-experimental questionnaire directly follows the answer sheet, and is to be filled out after you have turned the projector off. About this time I will return from the room down the hall where I will be working for a brief discussion and collection of the materials.

The starting signal will be the word BEGIN, preceded by a gestural cue for you to get ready. If the procedure and your tasks are clear, I will focus the first slide. The projector then functions automatically. I will hold up my index finger as the cue to get ready. Then, as I say BEGIN, start your first task.
Appendix C
High Overload

ANSWER SHEET

SEX DIFFERENCES IN COORDINATION AMONG MODALITIES

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<th>SEX</th>
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Visual Score | Percent Correct
Auditory Score | Percent Correct
Low Overload

**ANSWER SHEET**

**SEX DIFFERENCES IN COORDINATION AMONG MODALITIES**

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Visual Score ______  Percent Correct ______
Auditory Score ______  Percent Correct ______
Appendix D
POST-EXPERIMENTAL QUESTIONNAIRE

NAME _________________________ SEX ______________

PLEASE CHECK THE LINE THAT BEST APPLIES TO YOU.

1. DID YOU FIND IT DIFFICULT TO CONCENTRATE ON THE VISUAL STIMULI?
EASY 1 2 3 4 5 6 7 VERY DIFFICULT

2. DID YOU FIND IT DIFFICULT TO CONCENTRATE ON THE AUDITORY STIMULI?
EASY 1 2 3 4 5 6 7 VERY DIFFICULT

3. DID YOU FIND IT DIFFICULT TO RECORD THE ANSWERS?
EASY 1 2 3 4 5 6 7 VERY DIFFICULT

4. HOW WOULD YOU JUDGE THE COMBINATION OF TASKS?
EASY 1 2 3 4 5 6 7 VERY DIFFICULT

5. WHAT DO YOU THINK THE EXPERIMENTER MAY FIND FROM THIS EXPERIMENT?

COMMENTS:
Appendix E
Barron Complexity Scale (1963)

PLEASE ANSWER ALL QUESTIONS AS BEING EITHER TRUE OR FALSE FOR YOU. CIRCLE YOUR PREFERRED ANSWER.

BEGIN.

True  False  1. I believe in a life hereafter.
True  False  2. I get mad easily and then get over it soon.
True  False  3. I believe there is a God.
True  False  4. In religious matters, I believe I would have to be called an agnostic.
True  False  5. I frequently undertake more than I can accomplish.
True  False  6. The unfinished and the imperfect often have greater appeal for me than the completed and the polished.
True  False  7. I could cut my moorings—quit my home, my parents, and my friends—without suffering great regrets.
True  False  8. Politically I am probably something of a radical.
True  False  9. I think I take primarily an esthetic view of experience.
True  False  10. I remember that my first day at school was very painful.
True  False  11. I would enjoy the experience of living and
working in a foreign country.

**True**  **False** 12. I don't expect to have more than two children.

**True**  **False** 13. Many of my friends would probably be considered unconventional by other people.

**True**  **False** 14. The way things look now I guess I won't amount to much in the world.

**True**  **False** 15. I enjoy discarding the old and accepting the new.

**True**  **False** 16. I doubt that anyone will ever be able to predict my every move.

**True**  **False** 17. Some of my friends think that my ideas are impractical, if not a bit wild.

**True**  **False** 18. When someone talks against certain groups or nationalities, I always speak up against such talk, even though it makes me unpopular.

**True**  **False** 19. I enjoy the company of strong-willed people.

**True**  **False** 20. As a child my home life was not as happy as that of most others.

**True**  **False** 21. I have always had goals and ambitions that were beyond anything practical or that seemed capable of being realized.

**True**  **False** 22. I often get the feeling that I am not really part of the group I associate with
and that I could separate from it with little discomfort or hardship.

True False 23. People would be happier if sex experience were taken for granted in both men and women.

True False 24. I guess my friends tend to think of me as a cold and unsentimental sort of person.

True False 25. I don't like modern art.

True False 26. Disobedience to the government is never justified.

True False 27. Perfect balance is the essence of all good composition.

True False 28. It would be better if our teachers would give us a clearer idea of what they consider important.

True False 29. Straightforward reasoning appeals to me more than metaphors and the search for analogies.

True False 30. It is a pretty callous person who does not feel love and gratitude toward his parents.

True False 31. Things seem simpler as you learn more about them.

True False 32. Every wage earner should be required to save a certain part of his income each month so that he will be able to support himself and his family in later years.
True False 33. Kindness and generosity are the most important qualities for a wife to have.

True False 34. When a person has a problem or worry, it is best for him not to think about it, but to keep busy with more cheerful things.

True False 35. It is the duty of a citizen to support his country, right or wrong.

True False 36. Barring emergencies, I have a pretty good idea what I'll be doing for the next 10 years.

True False 37. Army life is a good influence on most young men.

True False 38. I prefer team games to games in which one individual competes against another.

True False 39. An invention which takes jobs away from people should be suppressed until new work can be found for them.

True False 40. A person who doesn't vote is not a good citizen.

True False 41. I become quite irritated when I see someone spit on the sidewalk.

True False 42. I often wish people would be more definite about things.

True False 43. It is always a good thing to be frank.

True False 44. When I get bored I like to stir up some excitement.
True False 45. Sometimes I have the same dream over and over.

True False 46. I much prefer symmetry to asymmetry.

True False 47. I would rather be a steady and dependable worker than a brilliant but unstable one.

True False 48. I would be willing to give money myself in order to right a wrong, even though I was not mixed up in it in the first place.

True False 49. It is annoying to listen to a lecturer who cannot seem to make up his mind as to what he really believes.

True False 50. There are times when I act like a coward.
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