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DISSENTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

by

Elaine S. Karr, B.Sc., M.A.

* * * * *

The Ohio State University

1977

Reading Committee:

Dr. Donald W. Thomas, Co-Adviser
Dr. William Flinn, Co-Adviser
Dr. Alfred C. Clarke
Dr. Ronald E. Fox

Approved By

Co-Adviser

Co-Adviser

Faculty of Agricultural Economics and Rural Sociology
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VITA

October 25, 1930 . . . . Born - Columbus, Ohio

1950 . . . . . . . . . G.D.H., The Ohio State University

1952 . . . . . . . . . B.Sc., The Ohio State University

1974-1976. . . . . . Graduate Research Associate,
Cooperative Extension Service

1975 . . . . . . . . . M.A., The Ohio State University

1977 . . . . . . . . . Assistant Program Development,
Continuing Education Non-Credit,
The Ohio State University

PUBLICATIONS

Mortvedt, M.M. & Karr, Elaine S., monograph "Ohio 4-H Agent
Program Assistant Consensus on Tasks, Program Assistant
Characteristics, Program Success and Work Relationship."


FIELDS OF STUDY

Major Field: Rural Sociology

Studies in Sociology of Family. Professor Alfred C.
Clarke

Studies in Family Counseling. Professor Ronald E. Fox
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Chapter I

INTRODUCTION

Background and Setting

A long-standing polemic has existed for many years regarding the issue of the advantages of rural living versus the disadvantages of urban living.

Historically, in the period prior to the 19th Century and beyond, Jeffersonian Agrarianism was a philosophy that was held by many people. Toennis in the late 1800's developed ideal type constructs that characterized Gemeinschaft and Gessellschaft systems. The concept of Gemeinschaft became the criterion for the rural social systems, and the concept of Gessellschaft was associated with urban social systems.

A community that is based on primary relationships supposedly fosters feelings of belonging, a sense of security and is conducive to involvement and closeness. One might say that such a community is one that nurtures.

The physical environment of a rural community is characterized by openness, low density, lack of congestion and fewer external stimuli.
Together the above social and physical factors, it would seem, represent an environment that contributes to positive mental health. Consequently, considerable suggestion has been made as to the advantages of the rural way of life from the standpoint of personality development of the child. Intrinsic to ruralism and therefore better personal and social adjustment were: greater family stability as indicated by lower divorce rates; greater incidence of kinship groups with more support mechanisms; less competition; lower density with a greater number of primary relationships; and more social participation in schools and associations due to fewer numbers of people available.

Michaelson (1970) reports that one of the most pronounced phenomena of our time, the overwhelming concentration of the citizens of modernized countries in cities, is accompanied by an ethos that glorifies rural virtues (p. 148).

As our society became more and more urban throughout the 19th Century and continued so into the 20th Century, more and more concern became expressed as to the "ills" of city living. Anthropologists, sociologists, educators, psychologists, psychiatrists, literary writers and the lay person voiced support.

The literary tendency was to denigrate the city although it was not unanimous. Walt Whitman and William
James were among the literary giants who extolled the virtues of New York City. In White and White (1962), it is written:

The volume of their voices did not compare with the anti-urban roar produced in the national literary pantheon by Jefferson, Emerson, Thoreau, Hawthorne, Melville, Poe, Henry Adams, Henry James, and William Dean Howells. Therefore, today's admirers of the American city would do well to realize that the American anti-urbanist has not lived only in the Kentucky mountains, in the Rockies, on the farms, in the Ozarks or in the Cracker Country. He has also lived in the mind and heart of America as conceived by the intellectual historian. The intellect whose house is the city according to some sociologists has produced the sharpest criticism of the American City (p. 2).

PARK, a leading sociologist in the 30's, did not regard urbanity as a virtue. Undesirable traits and conditions were developed in the urban world and not in what he referred to as the 'little worlds of the family, tribe and local community'. The latter encourage intimate relations and mutual responsiveness; they help nurture definite personalities rather than etiquette, urbanity, sophistication and finish.

As recorded in White and White (1962),

Urbanity is a charming quality, but it is not a virtue. We don't ever really get to know the urbane person and hence never know when to trust him. It is more or less fundamental traits of personality which arise in the intimate group which enables us to act with definiteness and assurance toward others. Manners are of secondary importance (p. 165).
A similar sentiment about city life was held by fellow sociologist Charles H. Cooley. Cooley's essay in Strauss (1968) reflects his country bias. He believed the country environment was conducive to authenticity, personalness and development of character. The advantage of being surrounded by fewer numbers of people and not being bombarded by information allowed the 'country person' to become sociable and favorable to talking and "knowing people". The "city person" by contrast, because of the numbers of people that he came in contact with had to respond by putting up some sort of barrier as an insulation.

They became conventional people with conventional smiles and conventional phrases for polite intercourse and assumed a cold mask for curiosity, hostility or solicitation.

In fact, a vigorous power of resistance to the numerous influences that in no way make for the substantial development of his character, but rather tend to distract and demoralize him, is a primary need of one who lives in the more active portions of present society, and the loss of this power by strain is in countless instances the beginning of mental and moral decline (p. 353).

Two books by John Dewey, *School and Society* (1899) and *Public and Its Problems* (1927), reflected a growing anxiety about modern man's loss of respect for the values that were nourished by small community living and consequently would result in an undermining of democracy.
In selecting the rural household and the playground as model communities, Dewey reasserted an older conception of the ideal mode of human association, just as Park did: cooperative activity, spontaneity, closeness to nature, intimate communication, and sympathy - these Dewey saw as the values of an earlier time that had to be preserved in some way by the progressive school (White and White, 1962, p. 171).

Erich Lindemann in his essay on Mental Health and the Environment (Duhl, 1963) linked the influence of environmental forces which may be responsible for the loss or lack of mental health. Reference was made to needs associated with security, belonging, moral order, sexual satisfaction and having a defined location in a society affording opportunities for recognized achievement, for winning and giving love and for suitable expression of hostility. The assumption was that a society or community which provided a steady flow of opportunities for such satisfactions, compatible with the dominant strivings of its members should be mentally healthy (p. 5). The relationship between the environment and mental health was further explored by Ian McHaig in Duhl (1962). Reference was made to neuroses, lung cancer, ulcers and stress disease as the badges of urban conditions. The effects of density and social pressure upon the incidence of disease and reproduction was linked
to urban living. The subtle influences of noise and disorder as "life-inhibiting" aspects was mentioned (p. 48-49).

James S. Plant (1957), a psychiatrist, considered mental strain as an effect of crowding. He described it as that feeling which arises from always having to "hold on to ourself". In areas where so many people surround others, one has the feeling of wanting to get away from everybody they know. If they have no outlet for freedom, then the resultant feeling is one of negativism or irritable outbursts of temper which are related to fatigue. In his clinical work in Newark, New Jersey, much of fatigue was observed alone or associated with the former (Hatt & Reiss, 1957, p. 660).

Even in the 1960's and 1970's, there were those who carried the "banner" for life in low density areas. The "man and woman on the street" when polled reflected a preference to live away from cities. In a Gallup Poll conducted in 1963, 49 percent preferred to live in small towns; 28 percent in the suburbs and 22 percent in cities (Public Interest, 1968). No breakdown was given as to what size of population represented small towns and cities.

A later poll by Louis Harris taken in 1970 revealed a growing disgust with bigness, especially the big city. While demographers predict that 80 percent of the United States population will be urban by 1980, only 45 percent of
those in the Life Poll wanted to be living in or near a city ten years from the time the poll was taken. Of 31 percent living in the cities at the time they were queried, two-thirds had desires to move and only a third wanted to stay another ten years.

It was conjectured that the high price of suburbia and availability of jobs would slow the mass flight from the city. In conjunction with the distaste with city life is that 95 percent wanted green grass and trees around them (Life, 1970, p. 102).

In Hopes and Fears of the American People (Cantrell & Roll, 1971), the highest percentage who reported no fears were those who lived in communities under 2,500.

Perhaps Alvin Toffler, author of the best seller Future Shock, can be considered as one of the strongest contemporary advocates of the perils of current urban environment. His phrase "loss of permanence" reflects a pattern of mobility that is present today. He does not make light of the transitory nature of human ties in urban society. The decline in average duration of human relationships is a corollary of the increase in the number of such relationships. Across the board, the average interpersonal relationship in our life is shorter and shorter in duration reinforced by greater mobility.
The more complexity people are faced with, the more coping mechanisms are necessary. The greater number of changes experienced, the greater need for adjustment and consequently greater stress regardless of whether the changes are desirable or undesirable.

There is increasing evidence that repeated stimulation of the adoptive reaction can be seriously damaging. Dr. René Dubos, author of *Man Adopting*, warns that such changeful circumstances as competitive situations, operation within a crowded environment, change in a very profound manner the secretion of hormones. One can type-read that in the blood or urine. Just a mere contact with the complex human situation almost automatically brings this about, this stimulation of the whole endocrine system (p. 340).

People are constantly bathed by visual, auditory, tactile, etc., stimuli from the environment. New stimuli trigger what experimental psychologists call an orientation response. Each time novelty is perceived in the environment, physical and psychological changes take place in the body even though the individual may be unaware of what is going on.

Mangus (1948) was one of the first sociologists who concentrated on the question as to whether rural homes and rural communities provided a relatively favorable environment for healthy personal and social development of children as compared to urban homes and urban communities.
Smith (1953) expressed the viewpoint that Mangus' work in the field of comparative rural and urban mental health could be considered among the best.

An article by Stokes and Miller (1976) called attention to the fact that in a ten-year period of research published in the Rural Sociology Journal, less than one percent of such research was devoted to the subject of rural-urban adjustment and personality. Most of the research in the realm of social psychology concentrated on aspirations and perceptions.

With a sparsity of time devoted to research on the topic of rural-urban environment and personality adjustment and Mangus' study being considered a "classic", this researcher has chosen to update Mangus' (1948) study "Personality Adjustment of Rural and Urban Children". The updating was of a statistical analytical nature. By using different statistical procedures of a more sophisticated nature, this researcher demonstrated how the original study may have presented different findings if more appropriate statistical tests had been used.

Since a similar instrument was used, a type of replication was also involved. The same independent variables were used. The dependent variables were measured in a like manner. The sample was more varied. In Mangus' (1948) study, nearly all third and sixth graders in Miami County,
Ohio, were given the California Test of Personality (elementary series).

The present study had data collected from three counties, namely, Franklin, Jackson and Wyandot. Third and sixth grade children in a school or two schools within a county were involved.

Statement of the Problem

Between the years 1945 and 1959, there appeared in the literature a sizeable number of studies concerned with rural-urban adjustment and personality. Nelson and Storey (1969) summarized the studies as to authors, date, location, focus, instrumentation used and results (p. 55).

The findings reported were not of a conclusive nature. Duvall and Motz (1945), Burchinal et al. (Hamilton County, 1957), Burchinal et al. (Marshalltown, 1957), Burchinal, Hawkes and Gardner, 1957, (1949), and Osborne, Greene and Sanders (1952), all reported no difference in adjustment between their rural and urban samples.

Stott (1945), Mangus (1948), and Haller and Wolf (1962), on the other hand, found that the rural youths in their samples exhibited higher adjustment than their urban counterparts.

Munson (1959), and Nelsen and Storey (1969) contributed to the inconclusiveness by showing that the rural youths in
their respective studies had the lowest order of adjustment.

It is not the intention of this author to discuss the above studies in detail at this time, but to discuss them in greater depth in the chapter on "Review of Literature".

According to Smith (1953), the source of the problem can be traced to the various methods employed, different ages involved, as well as sex of the groups, and the degree to which other related factors actually were under control from one study to another. Nevertheless, even with this diversity of methodology, they are suggestive of the kind of differences that eventually may be established (p. 115).

McMahon in Sociology of Rural Life (Smith, 1953), surveyed the principal differences found by one or more investigators. He found that the city persons when compared in their respective studies with their rural counterparts, were: 1) better adjusted emotionally; 2) less neurotic; 3) more likely to exhibit symptoms of nervousness; 4) less introverted; 5) possessed more withdrawing tendencies; 6) better adjusted personality; 7) more independent; 8) more dominant; 9) higher in resourcefulness; 10) less self-reliant; 11) lower in feeling of personal worth; 12) low in sense of belonging; 13) higher in rationality; 14) less practical-minded (p. 115-116).
It would seem that characteristics such as lower self-worth and low sense of belonging would be deterrents to favorable adjustment. Another paradox in the above traits is the higher degree of independence but less self-reliance. The above contradictions, if they are accepted as such, bear out the apparent ambiguities in definition and operationalization that were in existence. Interest in personality differences attributed to rural-urban environment began to wane. As was mentioned earlier in this chapter, little research has been devoted to the topic in the past ten years.

Part of the answer could rest with the claim that an increasing rural-urban interdependence brought about an increasing convergence of differences.

With the advent of mass communication and mass transportation then, it could be expected that fewer and fewer differences would exist as the barriers of isolation would begin to topple. This increased confluence has been evidenced by the changes in marriage and family, i.e., more egalitarianism; more women in the labor force; fewer number of births; greater number of divorces; more nuclear-style families and fewer extended family arrangements; and increased physical distance between families.

But there is still a strong viewpoint as expressed by Schnore (1966) that it is true that real differences are
declining but not to the point of disappearing. Observable differences do persist and regardless of place of habitation, the place of origin exercises a continuing influence on behavior later in life.

Sorokin is quoted in defense of the above position:

In order that such an obliteration become possible, it is necessary for the urban and rural areas to have the same density of population, the same size of community, the same homogeneity or heterogeneity of population, the same occupational milieu and nature of occupation, and the same intensity and character of the interaction system (Schnore, 1966, p. 132).

Two more recent studies (Willets, Bealer & Crider, 1973; van Es & Brown, Jr., 1974) confirmed that residence differences have not been leveled to the point of negligibility. The van Es and Brown study indicated that socio-economic status generally accounted for more of the variation in the dependent variables than either residence or occupation. When the effect of socio-economic status was removed, behavioral items were more often related to either occupation or residence than were attitudinal items. Although the amount of variance explained by residence was not large in the Willets et al. study, the rurality variable may still represent a very useful tool for dealing with attitudinal and possibly other differences as in the past. "It may currently be even more useful" (Willets & Bealer, 1973, p. 43).

In the area of comparative rural and urban mental health, Mangus' studies consistently favored the rural
component on personality adjustment level versus the urban element. Comparatively, most studies of this nature revealed no difference or a barely significant difference.

A follow-up investigation of Mangus' study showed that the average level of personality adjustment had risen among the city children, but had not improved much among the rural children. No indication was made as to whether the levels were now equal or whether the city children now exceeded the rural youths or whether the trend was indicative of a future pattern.

It was the attempt of this study to:

1) test the personal and social adjustment of third and sixth grade children residing in Columbus, Ohio (central city); Bexley, Ohio (city suburb of Columbus, Ohio); Jackson, Ohio; and upper Wyandot County. The California Test of Personality (primary and elementary series, form AA) was used.

2) semi-replicate the Mangus (1948) study, "Personality Adjustment of Rural and Urban Children".

3) utilize more sophisticated and appropriate statistical procedures than was utilized in the original study.

It was hoped by conducting such a study that this investigator was able to contribute knowledge to the field of Rural Sociology in the area of rural-urban differences.

Summary

In summary, there has appeared a considerable amount of literature, mostly theoretical, that has linked urban
environment and its complexity with possible social, physiological and psychological pathology.

It was the intent of this study to investigate the problem. This was done by conducting a study similar to the Mangus (1948) study.

In the process, more sophisticated and more appropriate statistical procedures were used; a comparison of the original analysis will follow, and a modified replication will be in effect.
Chapter II

REVIEW OF RELATED RESEARCH

Introduction

This chapter is devoted to a review of relevant literature. This review is divided into four sections. The first part is devoted to studies that are directly related to the present investigation. Almost all the research in this section has to do with personality adjustment of rural and urban children. Some of the studies' primary concern is personality characteristics of the samples and may or may not include adjustment levels.

The second section covers research on the effects of population density and group size on non-human animals. Causal connections between mental health and density have been made based on animal studies. These animal studies show increasing frequencies of neuroses and anti-social behavior with increased crowding.

The third category in this chapter is devoted to demographic and field and observation studies of density and personal space related to humans.
The last part covers laboratory experiments with humans exploring the effect of crowding on performance and interpersonal behavior.

**Studies of Rural-Urban Differences in Personality Adjustment and Traits**

One of the most extensive studies conducted in the field of rural-urban personality was *Rural-Urban Adolescent Personality* (Hathaway, Monachesi, Young, 1959). This study was not oriented toward adjustment per se, but specific personality traits. The Minnesota Multiphasic Personality Inventory was administered to more than 15,000 Minnesota ninth graders as part of a longitudinal investigation. Three residential classifications were employed: urban, town, and rural. The data indicated personality differences for rural and urban youths. Rural adolescents in general expressed more feelings of shyness, self-depreciation, suspicion of others, and a few fears rational to rural life. The urban counterparts were more apt to rebel against authority and were less self-critical and less suspicious of the motives of others.

Haller and Wolf (1962) reported on personality orientations of farm, village, and urban boys of a Michigan county. Controlling socio-economic status at two levels, middle and lower class, these investigators concluded that the results of the study provided a clear demonstration of
the hypothesis that personality orientations were related to residence. A total of 18 different personality orientation variables were directly or indirectly related to residence. "There are far too many residence differences to be attributed to chance" (p. 283). Urban boys scored lower on personality adjustment, giving support to earlier studies by Mangus (1948); Mangus-Woodward (1949); and Stott (1945).

In the article "Are Country Girls so Different?", Duvall and Motz (1945) reported the following significant differences: 1) more urban than rural girls considered their home atmosphere unhappy; 2) more urban parents were reported to be inconsistent in their training than rural parents; 3) rural parents were more strict disciplinarians; and 4) social behavior such as smoking and drinking was more predominant among the urban girls. But overall the similarities between the two samples in the areas of social experience and personal-family relationship adjustments were more numerous than the differences. The drinking and smoking difference may have been attributed to the nature of the sample.

Sewell and Amend (1943) administered the Minnesota Scale for the Survey of Opinions to 132 freshmen women entering the Oklahoma Agricultural Mechanical College in the fall of 1941. Sex and educational factors were completely controlled and race, nationality, age and geographic
differences were largely eliminated. The urban group was mostly from Tulsa and Oklahoma City, two relatively large cities. The researchers concluded that farm, village, town and city women did not differ significantly on personality characteristics (including adjustment) and attitudes. The corollary hypothesis, the magnitude of scores on the various tests should vary inversely with size of community, was disproven. Possible interpretations were inappropriateness of instrument and a non-representative sample since all were college students.

Landis (1949) made a comparison of measured differences in personality traits of 482 Washington State College girls. The Bell Adjustment Inventory test was used as the instrument of measurement. He found no significant differences in health and home adjustments. The findings showed a positive relationship between the level of parents' education and degree of daughters' emotional adjustment. On the matter of emotional adjustment, the city girls showed considerable advantage (38.0 percent, comparative emotional adjustment as measured by Bell Adjustment Inventory) over those from small town (32.0 percent) and farm (28.4 percent). The city girls showed considerable advantage (38 percent) over farm (28.4 percent) and small town girls (32.0 percent). "The larger the area of residence, the greater the number of girls who are emotionally well adjusted and the fewer
who are poorly adjusted" (p. 13). Although the differences were striking in chart form, the test of statistical significance was not met.

Stott (1945) used the California Test of Personality with farm children attending one-room country schools, farm children attending village schools, and nonfarm children. In his study, farm children attending village schools were highest in self-adjustment followed by nonfarm youths and by farm youths attending one-room schools. In social adjustment, the mean scores of the two groups, farm families and nonfarm families were essentially the same.

The overall results of this study suggested that conditions of rural living were definitely associated with the achievement of desirable personality adjustment by children involved in the sample. The most unfavorable condition was to belong to a family of the lowest occupational group - the common laborer in a farming community.

Osborne, Green and Sanders (1952) reacting to the inconclusiveness and contradictoriness at times in the research commented that the inconsistencies were probably the result of the "use of widely varying methods of defining and grouping the urban-rural population, rather than the result of procedural or statistical error." They called for the awareness of migration and recency and duration of residence as important variables to be
controlled in order to have what could be labeled as "pure farm" and "pure urban" groups. After giving the Bell Adjustment Inventory to the 1950 University of Georgia freshman class composed of 373 men and 210 women, in general, Osborne et al. found that their findings did not consistently support the widely-held view that rural residence is markedly conducive to wholesome personality adjustment; but rather that "urbanization is tending to attenuate urban-rural personality differences."

Burchinal, Hawkes and Gardner (1957) found no quarrel with Mangus' findings. In Mangus' study (1948), farm children as a group achieved a higher level of personal and social adjustment, 48.68 mean score (as measured by the California Test of Personality), than the urban children living in Piqua, Ohio (population about 16,000 in the 1940 census). The urban groups' mean score was 45.42.

Burchinal, Hawkes and Gardner examined the comparative adjustments of rural and urban youths in three separate studies. In 1950, researchers administered the California Test of Personality in Hamilton County, Iowa, to 642 children. The urban sample was represented by children in grades 1 - 4 in Webster City, population 7,600, and the rural component was the first four grades of rural one-room schools within the Webster City trading area. As a result of this study, negligible differences in the personality
scores between the two groups were found.

Similar findings were reported for a 1956 study of the same subject in Marshalltown, Iowa. This study was closer in replication of Mangus' study than the Webster City study.

A limitation of this Marshalltown study was the reportedly small city sample (74 children) that eventually was used for data.

Lastly, the authors used the Rogers Test of Personality Adjustment in a four-state investigation of similar concern in 1954-1955. Except for a significantly higher score for frequency of day-dreaming for urban children, no significant differences by area of residence existed. The null hypothesis of no difference by area of residence for personality adjustment of youths was supported.

The investigators concluded that their data supported the inference that a trend toward urbanization of small towns and rural areas had diminished the differences; and that "if any rural-urban differences in childrens' personality characteristics still exist, the differences should be expected to be found between rural children and children coming from larger urban areas" (Burchinal, Hawkes & Gardner, 1957, p. 87).

Munson (1959) compared 500 youths in three New York City schools and one town school in 1955-1956. Both town
and rural children attended the town school. Grades 4 - 7 were given the California Test of Personality.

Census tract data (1950) were used to select areas of similar socio-economic, ethnic and racial composition. Both urban and suburban scored significantly higher than town children on both parts of the test. Suburban children scored highest on the greatest number of traits tested. Urban children displayed superiority secondly over children from other areas. Rural children were third and town children were last. There were almost no significant differences between either urban and suburban children or between rural and town children. Nevertheless, the empirical data did not support the null hypothesis of no significant differences among urban, suburban, town and rural children in degrees of personality adjustment.

Munson, at the end of his article, presented the hypothesis that urban advantages such as broader social and cultural contacts; better schools; greater access to mass media should lead to a higher level of personal and social adjustments; and increased urbanization should decrease the gap with the exception of rural and large urban centers.

Mangus was involved in two studies (Mangus, 1948; Mangus & Woodward, 1949). Mangus and Woodward conducted research in Butler County involving tenth graders. Four hundred fifteen boys and 390 girls were included in the
sample. Residence was classified urban, farm and rural nonfarm. The California Mental Health Analysis was the standardized instrument used. The findings were in favor of the rural students as far as emotional maturity, sense of personal security, emotional stability, freedom from nervous mannerisms and in social participation.

Mangus (1948) was stimulated by World War II Selective Service studies of rejection rates that indicated that farm men were more likely to be evaluated as unfit for military service due to personality difficulties. He utilized three instruments: a teachers' rating scale, a peer rating which consisted of a "Guess Who" game and the California Test of Personality on 1,229 third and sixth grade children living in Miami County. He found that farm children "had achieved a somewhat higher level of personal and social adjustment than urban children living in a city of about 17,000 inhabitants".

When the standardized test scores were combined with teachers' rankings and companions' ratings, the rural children represented the larger proportion in the class of superior adjustment.

Even though the farm children in this study differed favorably in most areas than the city children, they did not compare as favorably with a standard group in and around Los Angeles, California, that was used in the development of
the instrument.

The sample of farm children did exceed the standard group in two areas; self-reliance and self-confidence. As a parenthetical note, social class was not controlled in the analysis.

Summary

An examination of the research related to rural-urban personality adjustment and differences suggests that there are no clearcut conclusions in this area. The data for the various studies represent different regions of the country as well as different strata of the population. Studies of social class, regional and ethnic differences among various segments of the American population make generalizations spurious except for localized samples employed in the respective study.

Inferences were made by various authors as to the influence of heightened urbanization as an agent of diminishing differences.

Animal Studies

There are those (Hawley, 1972; Freedman, 1973) who feel that hypotheses about human behavior based on animal studies is a long, questionable leap.

Rene Dubos (Freedman, 1973) has pointed out, "the readiness with which man adapts to potentially dangerous
situations makes it unwise to apply directly to human life the results of experiments designed to test the acute effects of crowding on animals" (p. 217).

On the other hand, pessimists have had a heyday in making analogies to social conditions in the crowded slums of large cities (Michaelson, 1970).

Regardless, these animal studies are provocative to the point of being used extensively in the literature; and to eschew them would be in error.

Although the present study is not explicitly concerned with density as an independent variable, there is no doubt of the importance of its implied status. Density is a key characteristic of urban living; and, along with size of a settled area, constitutes two of the most commonly chosen demographic variables. Hatt and Reiss (1957) expressed the belief that these variables present greater ease of operationalization and more freedom from cultural bias. Taylor and Jones (1964) reiterate the significance of size and density to urban and rural.

As a rule in the same country and at the same period, the size of the urban community is much larger than that of the rural community. In other words, urbanization and size of community are positively correlated. In the same country and at the same period, the density is lower in rural communities, generally, density and rurality are negatively correlated; urbanity and density are positively correlated (p. 51).
O. D. Duncan in Cities and Societies (Hatt & Reiss, 1957), observed that density declined regularly with community size. The density of the entire rural population (village and non-village rural) in a census categorization was undoubtedly well below that of any of the urban categories. On the average, then, classifying communities by size yields an ordering in terms of density as well (p. 39).

John Christian, an ethologist with training in medical pathology, advanced the thesis in 1950 that increase and decrease in mammalian populations are controlled by physiological mechanisms that respond to density. He presented evidence showing that as numbers of animals in a given area increase, stress builds up until it triggers an endocrine reaction that acts to collapse the population (Hall, 1966).

He traced the development of a herd of deer over a forty year period on the uninhabited and fertile James Island. The herd numbered five in the very beginning and grew to approximately 300. Then approximately one-half of the deer died the following year and the herd gradually stabilized at about 80 deer. Twelve deer were collected for biological study between March 1958 and March 1960. All the deer collected were in excellent physical condition. Examination of the carcasses before and after the "die-off" showed only a great drop in the weight of the adrenal glands
of the deer that died in great numbers.

It was concluded that physical crowding brings about intense interaction among animals which in turn lowers adrenal weight which then lowers the animals' defense mechanisms. Parallel findings were reported for muskrats and woodchucks.

The indication is that a physical condition in the environment brings about a particular social condition among animals which can lead to physical pathology. This situation has been labeled the "behavioral sink". A term coined by John Calhoun.

From the physiological side, Christian's study is complete and leaves nothing to be desired (Hall, 1969, p. 21).

However, left to be answered is the behavior of deer under stress. The question of increased aggression which possibly might have accounted for the high percentage of does and fawns as casualties during the die-off could not be answered due to lack of year-round observation.

Closely related to work on endocrine changes is a series of studies dealing with effects of population on emotionality under more controlled conditions. Somewhat surprising, animals raised in groups are generally less emotional than those raised individually (Morrison & Thatcher, 1969; Adler, Kruetner, & Jacobs, 1963; Adler,
1965; Thissen, 1964; Thissen, Zolman, & Rodgers, 1962). The most famous laboratory study was conducted by Calhoun (1962) with Norway rats. Calhoun put 80 rats in high densities in four pens located in a row and connected by ramps. The two end pens only had one ramp instead of two like the middle pens which allowed a more strict system of social control.

Each environment led to distortion of the prevailing pattern of rat behavior. The end pens were characterized by the dominance of a single male and homosexuality among most of the other males who remained. The middle pens experienced a high rate of infant neglect and mortality, a constant turnover of leadership accompanied by violence and the occurrence of pansexuality among the males.

These rat experiments gave some clue as to the social concomitants of the physical pathologies observed in previous behavioral sinks.

Summary

Animal research concerned with the effects of density have established the fact that in enclosed colonies very large populations lead to social and eventually physical anomalies, including inadequate maternal care for the young, increased aggressiveness, indiscriminate sexual behavior and a breakdown in social organization. Specific physical effects are increased adrenal activity and decreased
testes weight.

Larger groups appear to produce a decrease in emotionality. There is a reluctance on the part of many scientists to generalize from research on non-humans to humans because of man's ability to adapt.

**Demographic and Observational Studies**

Back in the 1930's, Faris and Dunham focused on housing type as a possible source of pathologies by finding that manic-depressive mental illness was related (via ecological correlations) to residence in rooming houses and apartments hotels in middle class areas as well as lower socio-economic areas.

These people were considered to be victims of isolation which was a predisposing factor to mental illness (Michaelson, 1970).

Fanning compared the health of wives and children of British armed forces personnel in Germany who lived in self-contained houses with the health of those living in three and four story apartments. All 558 were non-commissioned, in similar occupation categories and were assigned by chance. All had either two or three bedrooms, central heating and were equally close to community services.

The morbidity rate of apartment dwellers was 57 percent greater than their counterparts as measured by first consultation rates for any ailment. Differences were particularly
marked in respiratory infections and psychoneuroses. Within apartment buildings rates of neuroses varied directly with the location according to height of the apartments.

Fanning attributed the differences to cramped space and greater isolation of women in apartments furtherest from the ground level. Although gardens may have been below, these were not part of the normal living space of the family (Michaelson, 1970, p. 161).

Schmitt (1966) computed five different measures of population density for the census tracts in Honolulu and correlated these measures with rates of juvenile delinquency, adult crimes, suicides, mental hospital admissions, etc. The five measures used as independent variables were: 1) population per net acre; 2) persons per room; 3) household size; 4) couples doubled up; and 5) units in structure. Other variables were education and income.

Strong positive correlations between population per net acre and all measures of social, physical, and mental breakdown were found.

The correlations with density as measured by population per net acre were .3 for infant death rate, .7 for tuberculosis rate, .83 for venereal disease rate, .74 for mental hospital rate, .50 for illegitimate birth rate, .63 for juvenile delinquency rate, .55 for prison rate, and .04 for suicide rate which was an exception.
Even when Schmitt partialled out the variables of education and income the correlation was still significant. For example, after partialling out the above two variables, mental hospital admission rate changed from .74 to .69.

The reverse was not true for crowding; with net density kept constant, the correlation between overcrowding and the nine related variables approached zero.

Winsborough (1965) investigated the relationships between population density and a series of variables suggested by Calhoun's work as they occurred in the seventy-five Community Areas in the City of Chicago. Division by Community Areas provided a considerable variability in population density.

The five variables suggested by Calhoun's writings were: infant death rate, tuberculosis rate, an overall death rate adjusted for age differences between areas, an overall public assistance rate adjusted for differences in age composition, and a measure of the rate of public assistance to persons under eighteen years old.

Simple correlations were linear and positive. That is, the higher the density, the higher the rates. The exception was the overall death rate which showed no appreciable association with density.

The pattern was somewhat different when Winsborough controlled for the effects of socio-economic status, quality
of housing and migration. For example, public assistance went from .37 to -.39, public assistance to persons under eighteen from .45 to .14, and tuberculosis went from .20 to -.67.

Freedman (1973), in attempting to analyze the heterogeneous findings of Winsborough, speculated on the difficulty in interpreting partial correlations where so many factors are removed at once. The negative correlations presented an uncleanness. "It certainly would be a mistake to conclude that density actually has a strong beneficial effect on tuberculosis rate" (p. 222). On the other hand, the lack of positive correlations when the other factors are partialled out does suggest a lack of importance in the density relationship and variable measured.

Winsborough himself interjects a note of caution in his summary regarding high order partial correlations and makes reference to this statistical technique as a "notoriously tricky game".

Mitchell (1971) collected data based on interview information in Hong Kong. His main interest was the effect of space in small areas, especially within the household on emotional health and family role relations of people living under widely divergent housing conditions in Hong Kong.

Thousands of persons were interviewed by university students in the summer and fall of 1967 who were living in
housing with densities ranging from below twenty-two square feet per person to over a hundred square feet per person.

His findings suggest that densities do not affect deeper and more basic levels of emotional strain and hostility. Two manifestations of emotional strains, worry and unhappiness, were affected but when poverty was controlled for only the poorest members of the community showed a relationship.

The author concluded that high density discourages interaction and friendship practices among neighbors and friends but has no effect on emotionality or strain.

An explanation of this adaptation in Hong Kong might be offered by Michaelson (1970).

I have stressed continually that standard measures such as density per se are less keen and helpful in this context than other concepts that could potentially convey how the individual might experience the components of density. In addition, there is no under estimating the fact that the people of Hong Kong are not leading the lives of proper Philadelphians in their high density settings. They have evolved their own styles of life consistent with a unique culture, that are at least reasonably congruent with the exigencies of such high densities. Hong Kong is anything but a behavioral sink (p. 154-155).

The author goes on and cites the Japanese as a culture that exemplifies successful adjustment to very high densities.

The Japanese have small dwellings and private open space is minimal. A reaction to this pressure is "turning
inward". The interior of their homes is personal; furniture at a minimum; ornamentation is minimal and the Japanese garden portrays meaning and detail while occupying little space.

This strong distinction between public and private reflects the individual's domain and responsibility for care and accounts for the unkempt and unorganized exterior space in the city.

The importance of culture is reiterated by Hall (1965). "Culture is possibly the most significant single variable in determining what constitutes stressful density" (p. 191).

Hall's theory of proxemics addresses this aspect of man's perceptions and use of space.

Summary

The work based on demographic data and observational information has not produced findings that are conclusive. When there is a correlation with density, controlling for other factors can attenuate or remove the correlations and then at other times may not have the same effect.

Methodological differences add to the picture. The inconsistency of a universal definition of density compounds the problem and makes generalizations tenuous.

Another weakness of extrapolation is the lack of uniformity in cities. A study carried out in one particular
city is investigating the affects of density as it varies within only one city. Another city might produce different data and clearly culture is a strong mediating factor.

**Experimental Studies**

Dabbs (1971) constructed a $2 \times 2$ design to explore the effects of physical distance on communication. Each college student in this $2 \times 2$ design argued with his partner or had a friendly conversation in a room which was either large or very small. Proximity in the small room was expected to increase arousal, which in turn would intensify argumentation associated with an argumentative atmosphere or friendly feelings associated with a friendly conversation.

Fifty-six pairs of self-selected males were involved in the experiment. The small room was $3\frac{1}{2} \times 5$ feet with Ss' chairs not more than 2 feet apart. The large room was $12 \times 23$ feet with Ss' chairs 6 feet apart.

Palmar sweating tests were made prior to the discussion, on meeting the discussion partner and after a twenty-minute discussion.

The results showed that the Ss felt pressured, disagreeable and unfriendly in the small room. These feelings are considered more appropriate for arguing than for friendly conversation and the arousal produced by proximity was not content free which could be channeled to intensify either argument or friendly conversation.
In another experiment conducted by Griffit and Veitch (1971), the influence of density and temperature on interpersonal affective behavior was examined. It was hypothesized that interpersonal attraction responses and subjective evaluations of affective feelings are more negative under conditions of high effective temperature than under conditions of normal effective temperature and more negative under conditions of high population density than in low-density conditions.

Subjects were put in a sixty-three-square-foot room for about an hour. In half of the conditions three to five subjects occupied the room; in the other half of the conditions the number of subjects was twelve to sixteen. The subjects rated themselves on their subjective feelings of pleasantness, unpleasantness, comfortableness, uncomfortableness, performed a simple cancellation task and rated how much they thought they would like a stranger who was described to them in terms of his responses to a series of issues. The groups were not cross sexed.

The results indicated that under conditions of high temperature (93.5 degrees) and high population density (4.06 square feet per person), personal-affective, social-affective, and non-social-affective responses were found to be significantly more negative than under conditions of low temperature (73.4 degrees) and low density (12.73 square
feet per person). The significant temperature effect replicated previous findings (Griffit, 1970) while the "crowding" effect has not previously been demonstrated in humans.

A study by Freedman et al. (1971) investigated the effects of density on performance of task variables. Density was varied by using rooms of 160, 80, and 35 square feet and placing either nine or five subjects in each room. The Ss worked on six different tasks ranging from simple mechanical to complex mechanical operations. The subjects did as well when they were crowded as when they were not; high density neither facilitated nor interfered with the performance on simple or complex tasks.

In addition to these experiments conducted in a laboratory setting, there are those that are of an experimental basis in an open setting.

These investigations are concerned with the use of space. Hall (1959; 1966) and Sommer (1959; 1969) have been concerned with how people use a given amount of space, how close they stand to each other, whether or not they put distance between or ultimately take flight, and what effects space has on social interaction. Freedman (1973) has stated that although this type of investigation has not involved crowded conditions nor has the density been varied, it certainly has a relevancy to the subject under discussion.
Sommer and Felipe have shown that under most circumstances people will consider it an intrusion if someone sits down in a chair right next to them in a library when there are chairs available further away. They also conducted an experiment on the grounds of a mental institution and found that an idle, solitary person sitting on a park bench will exhibit non-verbal uncomfortableness when another sits on the same park bench and non-verbally interacts.

This work has also detailed the implications of spacing and leadership and degree of interaction in groups.

Summary

Experiments in a controlled setting have been conducted to determine the effect of density and crowding on task performance, interpersonal communication and feelings of affect; and other studies related to the invasion of personal space have some relevancy indirectly. Findings have revealed no negative effect on task completion.

There have been results that indicate negative correlations with density and crowding and interpersonal communication and subjective feelings between subjects.

The studies on personal space have noted the importance of "territory" and people's reactions to invasion of their privacy.
Freedman (1973) has written that all of these experiments are limited due to relatively small size samples, short duration of the density situation and "unnatural" or atypical conditions. But they do provide some indication of the effect of density under well-controlled conditions. Unfortunately, there are very few such experiments (p. 226).
Chapter III

THEORETICAL FRAMEWORK

The theoretical framework for the present study stems from Louis Wirth's (1938) theory of urbanism and the theory of George Simmel (1903).

Later elaborations of Wirth's theory by Morris (1968), Fischer (1972) and an elaboration of Simmel by an experimental social psychologist (Milgram, 1969) are included.

Carnohan, Guest and Galle (1974) traced the negative conceptualization of population densities on human behavior to the work of Simmel and Wirth. It is stated that:

theoretical support for population density's effects on social relationships rests on the notion that the number of social actors per unit of area affects the potential contracts, both for a given individual and within the aggregate. Frequency of contact and communication is potentially multiplied exponentially as density increases. These contacts and communications create the possibility of increases in cooperation and/or conflict. On an aggregate level, high density settlement and the large number of contacts each individual may make create a preponderance of secondary and segmental role relationships.

At the individual level, the possible effects of density concern health and well-being. The central idea here is that the mind is adversely affected by an excess of inputs. This is extended to ill effects upon the body as
well, particularly by analogy to the contagion model of disease. The excess of inputs is seen as a consequence of the increased contacts generated by increased density. Implicit is the idea that humans have some innate optimum level of contacts because there is a complementary body of theory and research indicating that isolation, or a low level of contact and stimulation, also has harmful effects (p. 497).

Louis Wirth in his famous essay "Urbanism As A Way Of Life" made an attempt to account for and explain the changes and ramifications of social life that had taken place in the shift from a rural to a predominant urban society in an industrialized country like the United States. He wrote:

"It is these changes and ramifications that invite the attention of the sociologist to the study of the differences between the rural and the urban mode of living. The city and the country may be regarded as two poles in reference to one or the other of which all human settlements tend to arrange themselves. In viewing urban-industrial and rural-folk society as ideal types of communities, we may obtain a perspective for the analysis of the basic models of human association, as they appear in contemporary civilization (p. 48).

Morris (1968) noted that the accounting for rural-urban differences was rarely explicitly stated. In this context, Morris believed that it was natural to assume that the primary features of the city were its obvious differences in size, density and heterogeneity.

The concept of city is the main component of Wirth's theory but it has implications for the rural setting. Using a concept of polarization in reference to rural and urban would by definition assess properties to one (urban or
cities) that would be contrary or opposite for the other (rural or country). Therefore, Wirth's theory which attributes size, density and heterogeneity as the key features of the city would by conceptualization of a polarization ascribe low levels of size, density and heterogeneity to the rural or folk societies.

Redfield (1947) dealt extensively with rural or folk society. He argued that "we may characterize the folk society as small, isolated, non-literate, and homogeneous with a strong sense of group solidarity" (p. 129).

The theory of Wirth presents numerous arguments about the consequences for organized social life in the context of large population size, high density and heterogeneity.

Major sociological propositions concerning the relationship between a) numbers of population, b) density of settlement and 3) heterogeneity of inhabitants and group life which can be drawn upon the basis of empirical observation are given:

1. Size of the Population Aggregate

Increasing the number of inhabitants in a settlement beyond a certain limit will have an affect on their interpersonal relationships. There will be a greater range of individual variation and greater potential for differentiation. The cultural life of urban residents with its ideas and artifacts will have an expected greater range
than those of rural inhabitants.

Such variations will result in spatial segregation of individuals based on color, ethnic heritage, and socioeconomic status. The bonds of kinship, of neighborliness, and the sentiments arising out of living together for generations under a common folk tradition are likely to be absent or, at best, relatively weak in an aggregate the members of which have such diverse origins and backgrounds (p. 51).

Within this setting, an interdependence linked with Durkheim's concept of mechanical solidarity furnishes the societal cohesion.

Furthermore, the multiplication of persons in a state of interaction where personal mutual acquaintanceships is lacking produces a type of segmentalization of human relationships that accounts for the "schizoid" character of urban personality.

Characteristically, urbanites meet one another in highly segmental roles. They are dependent upon more people for the satisfaction of their needs than are rural people and consequently are in association with a greater number of organized groups. But they are less dependent upon particular persons and their dependence upon others is confined to a highly fractionalized aspect of the other's global activity.
This type of contact is of a secondary nature. These contacts may be face-to-face but are not personal, superficial, transitory, and segmented. The reverse, indifference and "blase" outlook which urbanites manifest in their relationships may be regarded as devices for immunizing themselves against the personal claims and expectations of others (p. 55).

In an urban setting, the citizen experiences a freedom from the personal and emotional controls of intimate groups but on the other hand, experiences a loss of identification through participation. This is congruent to Durkheim's anomie.

2. Density

As in the case of numbers, there are certain consequences related to concentration in a limited space.

Darwin examined the relationship of density within the context of Flora and Fauna.

Durkheim noted in the context of human society that an increase in numbers when area is held constant tends to produce differentiations and specialization, since only in this way can the area support increased numbers. Density acts as a reinforcer to the effect of numbers in diversification of people and their activities and enhancing the complexity of the social structure. "Typically, our physical contacts are close but our social contacts are
distance" (p. 55).

The proximity of living and working together with no sentimental and emotional ties fosters a spirit of mutual exploitation. On the subjective side, as Simmel suggested, the close physical contact of numerous individuals necessarily produces a shift in the medium through which we orient ourselves to the urban milieu, especially to our fellow-men.

The urban world puts a premium on visual recognition. A uniformity is perceived which accentuates the role and sublimates the personal egocentricities.

-An insensitivity to nature is developed and a propensity for materialism becomes a hallmark (p. 56).

Density, land values, prestige, aesthetics, absense of noise, smoke and dirt determine the areas for desirable settlement.

Place and nature of work, income, social status, ethnic and racial traits, taste, prejudices are among the significant factors with which the urban population is selected and distributed into more or less distinct settlements (p. 56). Frequent close physical contact, coupled with great social distance, accentuates the reverse of unattached individuals toward one another and unless compensated for by other opportunities for response results in loneliness.
The necessary frequent movement of masses of people in a congested area stimulates friction and irritation, nervous tensions which are the consequence of the personal frustrations are accentuated by the fast tempo and complicated technology under which life in dense areas must be lived (p. 57).

3. Heterogeneity

The social interaction in the face of heightened variability of personality types in the urban milieu tends to break down the rigidity of caste lives and complicates the class structure. This induces a more differentiated social stratification.

The heightened mobility of the individual, which brings him within the range of stimulation by a great number of diverse individuals and subjects him to fluctuating status in the differentiated social groups that compose the social structure of the city, tends toward the acceptance of instability and insecurity in the world at large as a norm.

Morris (1968) edited Wirth's original text into a summary of twelve propositions.

a. (1) Growth and diversity are associated in the city with relatively weak bonds among co-residents.

(2) (a) Formal methods of social control substitute for allegiance to a common tradition and/or
(b) the problem of social control in a diverse population will have to be solved by separating the diverse sub-groups physically.

b. (1) As a town or city grows, it becomes less likely that any resident will know all the others personally.

(2) The majority of one's social contacts in the city are therefore likely to become 'impersonal, superficial, and transitory and segmental'.

(3) The city-dweller is more likely to treat social relationships as means to his own ends.

c. (1) A highly developed division of labor is associated with the emphasis on the treatment of social relationships as means to one's ends.

(2) The large firm will tend to dominate the small family business as the division of labor develops.

(3) Social integration requires the development of codes of ethics and etiquette for occupational groups.

d. (1) The elaborate division of labor grows as the market grows.
(2) Extreme specialization and interdependence is associated with an unstable equilibrium in the city.

e. (1) As the city grows, it becomes impossible to assemble all its residents in a single place.

(2) Therefore, increasing reliance has to be placed on indirect communication as a method of spreading information and opinions, and of making decisions.

f. (1) As the density of the population in an area increases, greater differentiation and specialization tends to result.

(2) Greater differentiation and specialization are indeed essential if the area is to support increased numbers.

g. (1) Physical contacts in the city are close, whereas most social contacts are relatively superficial.

(2) People are therefore categorized, and responded to, in terms of visible symbols.

h. (1) The city's pattern of land use is the result of competition for a scarce resource.

(2) The desirability of an area for residential purposes is influenced by many social factors.
(3) People with similar backgrounds and needs therefore consciously select, unwittingly drift, or are forced by circumstances into the same section of the city.

i. (1) The absence of close sentimental and emotional ties between co-workers and between co-residents fosters competition and mutual exploitation rather than cooperation.

(2) High population density implies frequent physical contact and living at a fast pace.

(3) The combination of frequent contacts and weak emotional ties can be maintained only if there are orderly and meaningful routines.

j. (1) The interaction of persons with very varied roles and personalities breaks down simple class distinctions.

(2) As a result, the class structure is less clear.

k. (1) City dwellers belong to a variety of groups, and their loyalties to these groups often conflict.

(2) Consequently, the city dweller is more likely to be geographically and socially mobile.

(3) Consequently too, the city dweller is likely to be sophisticated.
1. (1) The division of labor, combined with the emphasis on segmental relationships, exercises a levelling influence.

(2) This levelling influence can be seen also in the development of the 'pecuniary nexus'.

(3) This standardization provides elements for a common culture in society (p. 16, 17, 18 & 19).

It was to be understood that size, density and heterogeneity are not the only characteristics which cities shared but three key traits. Also, key features of the city are not the inevitable logical consequences of size and density of its groupings, but of a complex combination of features: its technology and communications system, its values and social structure, and its social and physical environment (p. 172).

Fischer (1972) wrote that the theory of Wirth contains two arguments: a sociological one, quite Durkheimian (Durkheim, 1933); and a social psychological one derived from Simmel (1957).

First, on the structural level, population size, density and heterogeneity (Wirth's definition of the city) lead sequentially to structural differentiation, formalization of institutions and anomie. Second, on the individual level, urbanism (in the demographic sense) leads to high levels of nervous stimulation, psychological overload and adaptation
in the form of social isolation (p. 189).

Further mention is made of the tendency to treat urbanism as a totality of the three components rather than as three independent variables. Wirth did discuss the effects of each separately; but, because similar consequences were ascribed to each and the indication was that to produce those consequences, the variables interacted. Analysis of them as a single factor is therefore more true to the theory.

Research (Duncan, 1957) has shown that size and density co-vary, but associations with heterogeneity are more tenuous. There are sufficient reports of homogeneous cities and heterogeneous rural areas to argue for separating the components.

Reiss (1955) reported that "hillbillies" commonly live in rather large and densely concentrated settlements, yet social interaction in these communities could not be characterized as anonymous or impersonal (p. 43).

Fischer (1972) contended, in his elaboration, that: as population size, density and heterogeneity increase, individuals who are part of that population are the unwilling recipients of increasing amounts of and increasing density in sensory stimuli calling for responses both physical and social; other people, public, messages, pleas for attention and concern. This raises the problem of "information overload" in the urban setting; more inputs than the human
organism can handle. Simmel (1957) and, in a recent elaboration of Simmel, Milgram (1970) have stressed the importance of this feature of city life. A directly related problem is overcrowding (Hall, 1966, p. 193).

Wirth's theory is not without criticism. Major criticisms are that the theory does not address itself to pre-industrial cities; there was not enough emphasis on heterogeneity and primary relationships in cities in places like ghettos abound in primary relationships. Another important limitation was the susceptibility of a town to the influence of conurbation. Peter Maus (1965) used a brief comparison of Forest Row, Sussex and Huddersfield to argue that the residents of smaller, less dense, more homogeneous, towns could be more likely to exhibit those behavior patterns which Wirth called urban.

In light of this ambiguity, Duncan (Hatt & Reiss, 1957) makes note that almost all writers on rural-urban differences stress the significance of community size. And, while most of them agree that characterization of a community as urban on the basis of size alone is obviously arbitrary, no one has suggested a practical basis for including other variables among the criteria of urbanism to be applied to all communities in standard fashion (p. 37).

Georg Simmel (1903) wrote on the "Metropolis and Mental Life". His original text in German was translated at a
later date by Kurt Wolff (1950).

As was pointed out earlier in this text, Simmel's theory of urban experience is of a social psychological base.

Of concern in Simmel's theory is the presentation of autonomy and individuality of the individual in the face of overwhelming social forces and life style that is equated with modern living.

He writes,

The psychological basis of the metropolitan type of individuality consists in the intensification of nervous stimulation which results from the swift and uninterrupted change of outer and inner stimuli. Man is a differentiating creature. His mind is stimulated by the difference between a momentary impression and the one which preceded it. Lasting impressions, impressions which are regular in direction use up less consciousness than does the rapid crowding of changing images, the sharp discontinuity in the grasp of a single glance and the unexpectedness of onrushing impressions. These are the psychological conditions which the metropolis creates.

In contrast, the rhythm of life in small towns and rural areas flows more slowly; habitually and evenly. The psychic life is rooted in emotional relationships. These emotional relationships stem from the more unconscious layers of the psyche. The metropolitan type person is one who relies on the intellect or rational forces of the psyche. He reacts with his head instead of his heart in an effort to insulate him against threatening elements of the external environment.
Another principle associated with dominance of the intellect is "money economy". The complex economic exchange is intrinsic to the metropolis and not to rural commerce. These two components, intellectual dominance and money economy, share a matter-of-fact attitude in dealing with people and in this attitude, a formal justice is often coupled with an inconsiderate hardness.

The individuality of phenomena is not commensurate with the pecuniary principle. All intimate emotional relations between persons are founded in their individuality, whereas in rational relations man is reckoned with like a number, like an element which is in itself indifferent; only the objective measurable achievement is of interest (p. 636-7).

This is seen as the opposite of the smaller circle in which knowledge of individuality produces an interpersonal warmth.

Reference is made to the 'blase attitude'. This attitude is seen as a result of the rapidly changing nerve stimulations which expend strength. An incapacity emerges to react to new sensations with the appropriate energy.

"This constitutes the 'blase' attitude which, in fact, every metropolitan child shows when compared with children of quieter and less changeable milieus" (p. 639).
In the 'blase' attitude, discriminatory senses become blunt. Money becomes the common denominator of all values. The large cities emphasize the material value of things much more so than smaller localities. Self-preservation within the large city demands a negative social behavior.

If so many minor reactions were responses to the continuous external contacts with innumerable people as are those in the small town, where one knows almost everybody one meets and where one has a positive relation to almost everyone, one would be completely atomized internally and come to an unimaginable psychic state (p. 640).

It is this phenomena that accounts for the image of cold and heartless that is associated with city life by small town dwellers.

In elaboration, Milgram (1969) points to the need of a concept that links the individual's experience to the demographic (size, density and heterogeneity) circumstances of urban life.

One link is provided by the concept of overload. This term, drawn from systems analysis, refers to a system's inability to process inputs from the environment because there are too many inputs for the system to cope with, or because successive inputs come so fast that input A cannot be processed when input B is presented. In this situation, adaptations come into being and priorities and choices are
made (p. 1462).

City life, contemporarily experienced, constitutes a continuous set of encounters with overload and adaptations. "Overload characteristically deforms daily life on several levels, impurring on role performance, the evolution of social norrus, cognitive functioning, and the use of facilities."

This was implicit in Simmel's theory when mention was made of the necessity to conserve psychic energy within the context of meeting vast numbers of people. The result was fewer acquaintances than their rural counterparts and maintaining more superficial relationships.

Adaptive responses in accordance with overload are: 1) the allocation of less time to each input; 2) disregard of low-priority inputs; 3) reception is blocked off prior to entrance into a system, i.e., use of unlisted telephone numbers; 4) the intensity of inputs is diminished by filtering devices so that only weak and superficial forms of involvement with others are allowed.

Milgram uses the Genovese case in Queens as an example of adaptation involving the total disregard of needs of those who are not relevant to the bystanders. The overload is in the social environment and takes a toll in social responsibility.
Another example is the difference in time and attention that urban sales personnel give to customers as compared to smaller towns.

In summary, the point is made that contrasts between city and rural behavior probably reflect the responses of similar people to very different situations, rather than intrinsic differences in the personalities of rural and city dwellers. The city is a situation to which individuals respond adaptively (p. 1465).

The basic tenet of the theory or theories of this study is that higher level of personality adjustment (dependent variable) arises out of a smaller, less dense and less heterogeneous locality (rural). Synonymous with urban areas are: much nervous stimulation, high level of structural differentiation, emphasis on formal mechanisms, and relatively greater inter-role mobility. As a result of the above conditions, social psychological problems of developing primary and intimate relationships arise as population size, density and heterogeneity increases. Thus rural areas are seen as providing more of the conditions which generate good personality adjustment or, in other words, good mental and social health.

Not to be excluded and to be seen as contingencies upon the dependent variable are certain intervening variables. Important extraneous or intervening variables are
the socio-economic status of the individual's parents, race or ethnic considerations, and length of residence in the area. These latter variables are important for past research has shown that they provide significant correlations with the dependent variable.

In line with the above theories, the following is the general hypothesis of this study which is essentially the same hypothesis that Mangus investigated in his study:

The personality adjustment of individuals is related to their type of residence, rural or urban. A rural-type residence is conducive to better personal and social adjustment. Factors of lower numbers, lower density, and lesser heterogeneity will contribute to higher adjustment.

Objectives

Specific objectives of this study are:

1. Measure the personal and social adjustment levels of third and sixth grade children residing in three urban-type areas and one rural-type area.

The urban areas will be represented by the following schools and their respective locations:

a. Chicago Avenue Elementary in an inner city section of Columbus, Ohio
b. Montrose Elementary in a suburb of Columbus, Ohio called Bexley
c. Kinnison Elementary in the small city of Jackson, Ohio in "Appalachia".

The rural area is represented by two schools in the Mohawk School District in upper Wyandot County, Ohio. The two schools are:

a. Sycamore Elementary
b. McCutchenville Elementary

The above two schools will be referred to as Mohawk School District in the discussion of the findings.

The California Test of Personality, primary and elementary series, will be the standardized instrument used. In Mangus' original study, only the elementary series was used.

2. Semi-replicate Mangus' (1948) study entitled "Personality Adjustment of Rural and Urban Children".

Hypotheses

1. (Third grade) Personal and social adjustment scores of children in Mohawk School District will be higher than the personal and social adjustment scores of children in attendance at Chicago Avenue Elementary and Montrose Elementary as measured by the California Test of Personality (Primary and Elementary Series, Form AA).
2. (Third grade) Personal and Social Adjustment scores of children in Mohawk School District will be higher than the personal and social adjustment scores at Kinnison School as measured by the California Test of Personality (Primary and Elementary Series, Form AA).

3. (Sixth grade) Personal and social adjustment scores of children in Mohawk School District will be higher than the personal and social adjustment scores of children in attendance at Chicago Avenue Elementary and Montrose Elementary as measured by the California Test of Personality (Primary and Elementary Series, Form AA).

4. (Sixth grade) Personal and Social Adjustment scores of children in Mohawk School District will be higher than the personal and social adjustment scores at Kinnison School as measured by the California Test of Personality (Primary and Elementary Series, Form AA).

5. (Third grade) Area and sex will have an interaction that will affect the scores obtained on personal and social adjustment sections of the California Test of Personality (Primary and Elementary Series, Form AA).
6. (Sixth grade) Area and sex will have an interaction that will affect the scores obtained on personal and social adjustment sections of the California Test of Personality (Primary and Elementary Series, Form AA).

7. (Third grade) Personal and Social Adjustment scores of females will be higher than the personal and social adjustment scores of males as measured by the California Test of Personality (Primary and Elementary Series, Form AA).

8. (Sixth grade) Personal and Social Adjustment scores of females will be higher than the personal and social adjustment scores of males as measured by the California Test of Personality (Primary and Elementary Series, Form AA).
Chapter IV

METHODOLOGY

Introduction

This chapter contains a description of the sample, an in-depth discussion of the instrumentation, definitions of the independent and dependent variables, comments on data source, and lastly a description of statistical procedures.

Description of the Sample

The total sample represents 355 third and sixth grade children from four different areas in Ohio. The four areas and schools are as follows:

1. Sycamore and McCutchenville Elementaries, Mohawk School District in upper Wyandot County - 94 children

2. Chicago Avenue Elementary, Columbus Public Schools, Franklin County - 83 children

3. Bexley - Montrose Elementary School - Bexley, Ohio, Franklin County - 82 children

4. Kinnison Elementary School - Jackson, Ohio, Jackson County - 96 children

Some characteristics of the four localities taken from the 1970 census can be found in the following tables.
Land Area and Population by County

Table 1 shows the urban-rural population breakdown, persons per square mile and land area of the involved counties.

Table 1
Land Area and Population by County

<table>
<thead>
<tr>
<th>County</th>
<th>Land Area</th>
<th>Urban Population</th>
<th></th>
<th>Rural Population</th>
<th></th>
<th>Density Per Sq.Mi.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Number</td>
<td></td>
<td>Percent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jackson</td>
<td>419 sq.mi.</td>
<td>12,253</td>
<td>45.1</td>
<td>14,921</td>
<td>54.9</td>
<td>64.9</td>
</tr>
<tr>
<td>Franklin</td>
<td>538 sq.mi.</td>
<td>795,438</td>
<td>95.5</td>
<td>37,811</td>
<td>4.5</td>
<td>1,548.8</td>
</tr>
<tr>
<td>Wyandot</td>
<td>406 sq.mi.</td>
<td>9,168</td>
<td>42.0</td>
<td>12,658</td>
<td>58.0</td>
<td>53.8</td>
</tr>
</tbody>
</table>


Population 1960 and 1970 for Cities and Villages

Table 2 presents the population for the cities and villages where the schools were located. In the case of Mohawk School District, only one village was reported in the census. The population for McCutchenville, an unincorporated village, where two sixth grades and one third grade were located, was not reported in the census. Rand-McNally reports the population of McCutchenville to be 300 in 1970.
Sycamore village is the largest town in upper Wyandot County and one third grade in Sycamore School is there.

More than one school had to be included in order to achieve the desired number of students.

Table 2

Population of Cities and Village Locations of Schools between 1960 and 1970 with Percent of Change

<table>
<thead>
<tr>
<th>Cities or Village</th>
<th>1960 Population</th>
<th>1970 Population</th>
<th>Percent of Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jackson City</td>
<td>6,980</td>
<td>6,843</td>
<td>-2.0</td>
</tr>
<tr>
<td>Bexley City</td>
<td>14,319</td>
<td>14,888</td>
<td>4.0</td>
</tr>
<tr>
<td>Columbus</td>
<td>471,316</td>
<td>539,677</td>
<td>14.5</td>
</tr>
<tr>
<td>Sycamore Village</td>
<td>998</td>
<td>1,096</td>
<td>9.8</td>
</tr>
</tbody>
</table>


As can be seen in Table 2, the cities of Bexley, Jackson and Columbus all represent urban populations as defined by the 1970 census. Hence, the three schools, namely, Montrose in the suburb of Bexley; Kinnison in Appalachian Jackson; Chicago Avenue in central city Columbus; will represent the urban sample.

Bexley and Columbus have experienced growth while Jackson has shown a decline since 1960. Sycamore and
McCutchenville villages are rural by definition. Therefore, Mohawk School District will represent the rural sample. Since 1960 the population of Sycamore village has increased by 9.8 percent. No information related to population was given for McCutchenville (population 300 in 1970).

It was the attempt of this researcher to develop a sample that would resemble a continuum. Using population (U.S. census definition of rural-urban) as points along the continuum, the polarized areas would be Mohawk School District (rural) and Chicago Avenue Elementary (central city Columbus). Within these two extremes, Kinnison Elementary (Appalachian small city) and Montrose Elementary (suburb of Columbus) would fall into place along the continuum.

Family Income
A comparison of family income according to median and mean can be seen in Table 3. As can be seen, Bexley has the highest median income ($14,390) and highest mean income ($19,023) with a miniscule percent of families receiving public assistance income. Columbus has a median income per family of $9,731 and a mean income of $10,848. 6.2 percent of families receive public assistance. Chicago Avenue School, with a 43 percent ADC rate qualifies for Title I Services (Columbus Public Schools Pamphlet, "Schools Eligible for Title I Services," 1976-1977). Jackson shows a rather high percentage level (13.3 percent) of families
receiving public assistance. The median income is $7,641 and mean income is $8,921.

Family income for towns less than 2,500 was reported by county rather than individual city.

Wyandot County's median income is $8,679 and mean income is $9,171. Eight percent of the family incomes were below poverty level.

Table 3
Family Income by City and County with Percent Receiving Public Assistance

<table>
<thead>
<tr>
<th>City or County</th>
<th>Income</th>
<th>Percent Receiving Public Assistance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Median</td>
<td>Mean</td>
</tr>
<tr>
<td>Columbus</td>
<td>$9,731</td>
<td>$10,848</td>
</tr>
<tr>
<td>Bexley</td>
<td>14,390</td>
<td>19,023</td>
</tr>
<tr>
<td>Jackson</td>
<td>7,641</td>
<td>8,921</td>
</tr>
<tr>
<td>Wyandot County</td>
<td>8,679</td>
<td>9,171</td>
</tr>
</tbody>
</table>

*---not applicable (base of derived figure too small)

Original Instrumentation

In Mangus' original investigation, three criteria were used as means of measuring the dependent variables personal and social adjustment. These included:
1. A standardized personality test by which students in the study recorded their own feelings and attitudes pertaining to their personal and social adjustment.

2. A device by which the different teachers were asked to rank their students according to their best judgment of the student's mental health.

3. A companion's rating scale by which students in each class were allowed to record their own observations of deviant attitudes and behavior in the other members of their class.

The scores of each instrument were computed both individually and as a composite to ascertain the degree of adjustment. In addition, the standardized test scores were totalled and presented separately to determine the total adjustment, as well as personal adjustment and social adjustment, of the boys and girls in the survey.

For the purpose of the present study, only the standardized test, California Test of Personality, is going to be utilized. The rationale for this decision is as follows:

1. The companion ratings were in the form of device or test called "guess who" constructed by two members of a survey staff involved in a study of Health and Physical Education in Columbus Schools
conducted by Ohio State University in 1941 (Holy, 1942). Since there were no personality tests suitable for children in the primary grades, and the children were not capable of reading the "Guess Who Game" (Holy, p. 137), trained observers observed the children and rated them as to evidences of maladjustment.

In Mangus' bulletin entitled "Mental Health of Rural Children in Ohio," it was stated that in order to utilize children's judgment of each other, a "Guess Who" test was administered to all third and sixth grade children (Mangus, 1949, p. 7).

Each child was asked to write in the name of the proper person (him or herself, or another) or to write in "nobody" if the description fitted no one in the room.

A sample test was not to be found in the Appendix of the published monograph "Study of Health and Physical Education in Columbus Schools," No. 25, 1942. Therefore, it was not possible for this investigator to replicate that part of the original testing procedure.

2. The teachers were asked to rank the members of their respective classes. In response, each
teacher ranked the members of his/her class into seven groups on the basis of his/her best judgment of each child as a "normal, wholesome, happy, well-adjusted person." The different levels were verbally described as: 1) far above average, 2) well above average, 3) noticeably above average, 4) just average, 5) noticeably below average, 6) well below average, and 7) far below average. Comparisons could only be made between rural farm and rural nonfarm children as city children were not part of the county and village schools.

When teachers are asked to judge the normality of a child's personal and social development, and the guideline is a generalized statement such as "normal, wholesome, happy, well-adjusted person" (Mangus, 1949, p. 7), obviously the potential of a wide range of ambiguity is present.

"There is hardly a term in current psychological thought as vague, elusive and ambiguous as the term 'mental health'. That it means many things to many people is bad enough. That many people use it without even attempting to specify the idiosyncratic meaning the term has for them makes the situation worse..." (Jahoda, 1958, p. 3). Definitions often contain implicitly personal or general
philosophies -- they often specify how human beings "ought" to be (Jahoda, 1958, p. 4). Also according to Jahoda, much of the confusion in the field of mental health stems from the failure to establish whether one is talking about a person's mental health as a sustaining characteristic or as a momentary attribute of functioning.

As far as "normality" is concerned, cultural anthropologists have proven time and again that culturally and cross-culturally, there is a vast range of behavior that can be regarded as normal. It is generally accepted that the term "normality" covers two different concepts: "normality" as a statistical frequency concept, and "normality" as a normative idea of how people ought to function (Jahoda, 1958, p. 15). It is possible for the two concepts not to be congruent.

The term "happiness" is widely used as a criteria of mental health. Karl Menninger (1947) said:

Let us define mental health as the adjustment of human beings to the world and to each other with a maximum of effectiveness and happiness (Jahoda, 1958, p. 18).

Jones (1942) also refers to happiness as a criterion of normality, while Boehun (1955) preferred the term "satisfaction". "Mental health is a condition and level of social functioning which is socially acceptable and personally satisfying" (Jahoda, 1958, p. 19).
It is the opinion of Jahoda that only when happiness or well-being are clearly conceived of as personality predispositions, rather than as momentary feeling states depending on the specific circumstances, do these criteria appear serviceable.

Past research has been inconclusive in the area of teacher ratings. Conflicting results have been reported in studies conducted to determine the consistency and accuracy of teacher ratings of pupil behaviors. In general, the results of previous research (Barnard, Zuirbardo, and Sarason, 1968; Feshbach, 1969; Openshaw, 1967; Tolot, Scarpetti and Lane, 1957) have indicated that teachers are not consistent in their overall ratings of pupil behaviors (Elmore & Beggs, 1975, p. 70). Two more-recent studies by Miller (1972) and Rubin and Krus (1973) have reported fairly high test and retest reliability coefficients for teachers who have rated student behavior. In both studies, some type of itemized test was used versus a subjective device. In the Miller study, the School Behavior Checklist was the preferred instrument; and Rubin and Krus used the School Behavior Profile (Elmore & Beggs, 1975, p. 70).

In the study by Elmore and Beggs (1975), the results clearly indicated that teachers' ratings of pupil personality traits over a short period were not consistent. Two important questions raised were whether the terms used to
describe personality traits had equivalent connotations to teachers trained in the same profession discipline, and secondly, do teachers' attitudes toward their students change frequently, for example, daily, weekly, as well as over a two-week period?

In reference to a term having a substantial amount of agreement between psychologists and teachers, Cookson (1975, p. 56) made the statement that teachers' and psychologists' notions of stability - unstability are quite discrepant. It has been demonstrated that teachers regard impulsive children as unstable. Hallworth (1961; 1964; 1965; 1966) showed experimentally that there was a marked similarity between Osgood's factors of connotative meaning (Osgood, 1962) on the one hand and personality factors derived from teachers' ratings on the other. "In rating pupils on traits in the emotional stability cluster, teachers are, in effect, asking themselves, 'How much do I approve of him?"' (Cookson, p. 56). For this reason, Hallworth also refers to rated emotional stability as conscientiousness and evaluation as a pupil. In other words, teachers' ratings of pupils' emotional stability are ratings of the individual's behavior as a "pupil" and the ratings are influenced by the teachers' expectations of how a "pupil" should perform.
Conclusion

Mangus' original study employed three instruments to measure the dependent variable, personality adjustment. The three instruments were:

1. a standardized test of personality - the California Test of Personality (Elementary Series)
2. a test called "Guess Who" used as a companion rating scale
3. a device by which different teachers were asked to rank their students according to their best judgment of the student's mental health.

The last two instruments mentioned will not be utilized in the present study for the following reasons:

1. the "Guess Who" game is not accessible at the present time
2. it is the feeling of the investigator that the teachers' ranking method was too generalized and subjective. Ambiguity was implicit. This decision, in the opinion of the author, is substantiated by related research presented in this chapter.

Present Instrument

The Elementary Series of the California Test of Personality was the standardized test employed for the sixth grade. The Primary Series was the appropriate test for the third grade.

This is in contrast with the 1948 study. Originally, only the Elementary Series was employed. "The Elementary Series of the California Test of Personality was the
standardized test employed" (Mangus, 1949, p. 7). It is difficult to understand why the Primary Series was not used because the Primary version was ready for use in 1940. The Elementary level was developed in 1939. The Primary Series is deemed appropriate for K - 3 grades by the authors of the test. Both were revised in 1953.

Among the reasons which led to the 1953 revision were: 1) the development of additional validity data; 2) the extension of suggestions for interpretation; 3) the development of additional data regarding reliability (particularly for the lower scores on the test instrument); 4) the reexamination of the comparability of the two forms for each level so that one set of norms could be utilized; and 5) the reorganization of items for each of the equivalent components so that one scorer's answer sheet could be used with either Form AA or BB on each level (Manual, California Test of Personality, 1953 Revision, p. 3). Both levels are comprised of the same two main sections; personal and social adjustment. Each section is made up of six subtests. The subtests are the same for both levels. In the Primary edition, each of the subtests contains eight questions, a total of ninety-six altogether. The Elementary version, on the other hand, has twelve questions in each subtest, totaling 144 in all. Section I of the profile contains the subtests pertaining to personal adjustment. Those components
and their definitions are: 1) self-reliance -- an individual may be said to be self-reliant when his overt actions indicate that he can do things independently of others, depend upon himself in various situations, and direct his own activities; 2) sense of personal worth -- an individual possesses a sense of being worthy when he feels he is well regarded by others, when he feels that others have faith in his future success, and when he believes that he has average or better than average ability; 3) sense of personal freedom -- an individual enjoys a sense of freedom when he is permitted to have a reasonable share in the determination of his conduct and in setting the general policies that shall govern his life; 4) feeling of belonging -- an individual feels that he belongs when he enjoys the love of his family, the well wishes of good friends, and a cordial relationship with people in general; 5) withdrawing tendencies -- the individual who is said to withdraw is the one who substitutes the joys of a fantasy world for actual successes in real life; and 6) nervous symptoms -- the individual who is classified as having nervous symptoms is the one who suffers from one or more of a variety of physical symptoms (Manual, California Test of Personality, 1953 Revision, p. 3).

Section II is related to the following six components of social adjustment: 1) social standards -- the individual
who recognizes desirable social standards is the one who has come to understand the rights of others and who appreciates the necessity of subordinating certain desires to the needs of the group; 2) social skills -- an individual may be said to be socially skillful or effective when he shows a liking for people, when he inconveniences himself to be of assistance to them, and when he is diplomatic in his dealings with both friends and strangers; 3) anti-social tendencies -- an individual would normally be regarded as anti-social when he is given to bullying, frequent quarreling, disobedience, and destructiveness to property; 4) family relations -- the individual who exhibits desirable family relationships is the one who feels that he is loved and well-treated at home; 5) school relations -- the student who is satisfactorily adjusted to his school is the one who feels that his teachers like him, who enjoys being with other students, and who finds the school work adapted to his level of interest and maturity; and 6) community relations -- the individual who may be said to be making good adjustments in his community is the one who mingles happily with his neighbors, who takes pride in community improvements, and who is tolerant in dealing with both strangers and foreigners (Manual, California Test of Personality, 1953 Revision, pp. 3-4).
Each subtest is scored separately and the separate scores are added to obtain a personal adjustment score, a social adjustment score, and a total adjustment score for each child.

Tests of personality are designed to measure the way people usually think, feel or act. They are generally not as statistically reliable as tests of achievement and ability.

The reliability of the total scores on the test (Form AA) range from .88 (Primary) to .94 (Elementary). The reliabilities of the subtest, Personal Adjustment (Form AA), range from .83 (Primary) to .93 (Elementary). The social adjustment reliabilities are .80 (Primary) to .92 (Elementary). These reliability coefficients were computed with the Kuder-Richardson formula.

The correlation between Sections 1 and 2 vary from .63 to .77. According to the authors, this range is sufficiently low to emphasize the desirability of studying the individual from the standpoint of both personal and social adjustment. The reliabilities of the component tests are sufficiently high that they provide an aid in locating more restricted areas of personality difficulty. The statistical procedure was the Pearson product moment r (Manual, California Test of Personality, 1953 Revision, p. 6).
The authors attempted to assure the validity by a careful and extensive selection of the items. Original sources were psychological publications and original research conducted by the authors. By disguising the items so as to prevent the subject's detection of their purpose, they reinforced the test validity.

**The Dependent Variable**

**Personality Adjustment**

The term "adjustment" in the mental health field is not without ambiguity. It is often found in a context that leaves to anyone's whim whether it should be understood as passive acceptance of life's situations or as a synonym for adaptation (Jahoda, 1958, p. 62).

Cattell in Buros' Mental Measurements Yearbook (1940) makes reference to the fact that the notion of adjustment between an individual and his/her environment is a standard frame of reference for analysis of personality. But raises the question, is it possible to speak of an adjustment of the self to the self?"

Ambiguity is explicit in Sims' review of the California Test of Personality (Buros, 1940). He makes reference to "...the vaguely defined area called adjustment..."
The term "adjustment" as used by Mangus (1948), refers to the extent to which the various systems of attitudes, feelings, and actions which make up the personality function harmoniously together, and the extent to which a personality functions efficiently in a world of other persons.

Good personality adjustment implies a minimum of warped and distorted attitudes and emotions on the one hand, and a reasonable harmony in the operation of the person's normal attitudes on the other. It also implies adequate opportunities to carry out the activities demanded by one's normal attitudes in harmonious relations with those external to him or her.

Poor personality adjustment or maladjustment arises in the individual when conflicting demands made upon the person precipitate internal conflict or feelings and when the individual is deprived of necessary experiences that allow satisfaction of needs personal and social. Such continued conflicts and deprivations are called frustrations.

Frustrations produce emotional tensions which result in psychological and psychosomatic symptoms. Classical physical signs are headaches, stomachaches, loss of appetite, tiredness, etc. Mental symptoms are boredom, depression, daydreaming, anxiety, guilt, etc.
Personality

The problem of defining personality is a difficult task. There have been at least fifty definitions ( Guilford, 1959) and theorists have selected from an unabridged dictionary 18,000 words that could be used to analyze and discuss personality (Bernard, 1974, pp. 5-6).

Recent discoveries about DNA, RNA and brain chemistry have probably resulted in modifications of some of the previously formulated definitions. Stagner (1961) believed that personality should be defined in terms of two broad categories which are not contradictions of each other; i.e., in terms of the stimulus value a person has on others and in terms of response (Bernard, 1974, p. 6).

Mangus (1948) defined personality as a biosocial product made up of various systems of habits and attitudes of his/her native endowments and the interaction of this maturing individual with his/her social experiences within the surrounding environment (p. 566).

According to the above definition, personality includes biological, psychological and social factors within the related categories of heredity, self and environment.

Perhaps a more comprehensive term than biosocial would be biopsychosocial. In this way, the psychological self is explicit and not necessarily implied in the definition. Overall though, for the purpose of defining the variable
personality in this study, it is the opinion of this researcher that the definition offered by Mangus is applicable.

The Independent Variables

1. Residence by area -- 4 levels*
   1a. Chicago Avenue Elementary - Inner City, Columbus, Ohio
   1b. Kinnison Elementary - Jackson, Ohio (Appalachia)
   1c. Sycamore and McCutchenville Elementary, upper Wyandot County, Ohio
   1d. Bexley - Montrose, Suburb, Columbus, Ohio

2. Sex - the fact or character of being either male or female

* As defined by the 1970 Census, "urban" consists of places of 2,500 inhabitants or more incorporated as cities, boroughs, villages, and towns (except towns in New England, New York and Wisconsin); the densely settled urban fringe, whether incorporated or unincorporated, or urbanized areas; and unincorporated places of 2,500 or more inhabitants. A suburb is a residential community generally located outside the city limits but dependent upon the central city (Rodgers & Burdge, 1972, pp. 279-280). Rural areas are any remaining areas not falling into one of the three aforementioned categories. The rural area may be farm or nonfarm as far as population is concerned. The rural nonfarm population includes all persons living outside urban areas who do not live on farms. This category includes persons living in a variety of residences, such as nonfarm homes in the open country separated by distance from other residences; those in villages of less than 2,500 inhabitants; and those in some of the fringe areas surrounding incorporated areas of less than 2,500 residents. The total farm population includes all persons living on farms regardless of occupation.
Data Source and Collection

There are two sets of data in this investigation; scores on the California Test of Personality (Primary and Elementary Series, Form AA) and socio-economic data comprised of four factors: educational level of parents or guardian; type of occupation of parents or guardian other than parent; length of residence in particular school district; and family income. This latter data will merely serve as descriptive information related to the four components of the sample.

Originally, this researcher's intent was to conduct a correlated study. During the months of planning and organization, it became obvious that a correlation-type investigation was not going to be feasible. A major reason was the high priority placed on privacy, especially with a psychological test that was going to be given to the children. Socio-economic information was not included in the original study, and the inclusion of the socio-economic factors will possibly allow the reader to make some inferences regarding the results.

The standardized test was administered by the researcher during the month of April, 1977. The sixth graders took the test silently while their teacher was present in the room. The teacher was instructed to aid only in word definitions. While the sixth graders were taking the test, the
researcher orally administered the test to the third graders with the teacher present. The presence of the teacher assured decorum and allowed for a conflict-free test situation.

Paid interviewers made telephone calls to the respective homes in search of the socio-economic data. Parents and a few guardians were asked to answer four brief questions.

A letter informing the parents that the study was going to take place had already been sent by first class mail. Enclosed was a self-addressed, stamped envelope to the researcher with a tear-sheet that was to be signed by the parent if permission for the child to be in the study was to be denied. Approximately 5 to 10 percent of the parents denied permission. A sample of this notice can be found in Appendix A.

One problem with the telephone calls that was encountered in the Mohawk School District was that a number of children lived where a long-distance call had to be made. The cost was prohibitive and, as a result, that group had a 35 percent response rate as compared to an 80 to 99 percent response rate for the other three groups.

**Statistical Procedure**

This investigation was comprised of four samples. The F test provides a method for analyzing the difference
between more than two sample means. As implied by the name of this technique, analysis-of-variance, it is concerned with analyzing the variance estimates obtained from the various samples.

The evaluation of the F ratio (ratio between the mean squares between groups and the mean square within groups) using the degrees of freedom associated with the mean square estimates per units allows the researcher either to accept or to reject the null hypothesis that there is no difference among the various sample means (Elzey, 1971).

MANOVA, a statistical technique in the SAS (Statistical Analysis System) which is being used, is similar in principle with analysis of variance or ANOVA.

Multivariate analysis is concerned with two dependent variables; whereas in analysis of variance, the dependent variable is univariate. The F ratio is computed differently, therefore, the corresponding tables of critical region are different.

The MANOVA provides all tables of means and variances for each of the dependent variables, personal adjustment and social adjustment.

A correlation utilizing the Pearson r will be run to establish the independence or dependence of the two dependent variables. The authors reported an r of .68 between the two tests, and so a correlation is to be expected.
Since the two dependent variables appear to be related, it is deemed proper to analyze the two dependent variables as a bivariant factor utilizing a multivariant ANOVA.

A finding of no significance will require no further testing.

A finding of significance would prompt the researcher to use an analysis-of-variance technique called Multiple Comparison.

As a matter of procedure, a Univariate ANOVA for each dependent variable will be implemented.

Summary

This chapter described the purposes of the investigation. A lengthy discussion followed concerning the original instruments. A conclusion was made in behalf of the California Test of Personality with a description of it. Definitions were presented for the independent and dependent variables. In addition, data source and sample was discussed. Some social characteristics of the four localities involved taken from the 1970 Census were described. In the last part of the chapter, the statistical procedure to be employed was presented.
Chapter V

SOCIO-ECONOMIC DATA

Introduction

In the past, research has shown that socio-economic factors play an important role in personality adjustment findings. Ideally, such factors should be correlated with the test scores.

The present study did not follow the above pattern for a major reason, i.e., the current attitude on the part of the public regarding privacy and psychological tests greatly impedes the feasibility of correlational research.

Even so, socio-economic characteristics are included as descriptive data to give the reader a profile of the families related to the sample and possibly to allow for some suppositions.

Socio-economic characteristics (education, occupation, mobility and family income), will be discussed in this chapter. The socio-economic data is analyzed in terms of frequencies with respective medians.

Tables 4 through 7 present selected socio-economic characteristics of the families of the children involved.
As was stated in an earlier chapter, the rural area did not have as high a response as the other three areas, due to certain limitations.

**Education**

Table 4 shows the level of education of the fathers and mothers for each area. Chicago Avenue had approximately forty homes where the father was absent. Bexley-Montrose fathers had the highest median years (16.3) as compared to Chicago Avenue with the lowest (10.45) median years. Mohawk School District fathers showed a median of 12.2 years and Jackson had a median of 12.4 years of education completed. Fifty-eight percent of the fathers who responded in the Chicago Avenue area did not graduate from high school. Mohawk School District was next highest with a reported 41.1 percent who did not have a high school diploma. Jackson followed Bexley-Montrose (80.9 percent) with the highest percentage (29.6 percent) who had done advanced work.

The Bexley mothers, like the fathers, had the highest median years of education (14.6). The Chicago Avenue mothers had the lowest (11.5) number of years. Mohawk mothers' median years were 12.4 and Jackson's were 12.4 years. Averages, except Mohawk, were lower than the comparable cross-sexed parent. More Mohawk mothers finished high school than the fathers (67.7 percent). 63.7 percent
### Table 4

Years of School Completed by Parents by School

<table>
<thead>
<tr>
<th>Years</th>
<th>Chicago Ave. (Central City)</th>
<th>Mohawk School Dist. (Rural)</th>
<th>Bexley-Montrose (Suburban)</th>
<th>Jackson (Appalachia)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td>Father</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 - 8</td>
<td>11</td>
<td>29.0</td>
<td>6</td>
<td>17.6</td>
</tr>
<tr>
<td>9 - 11</td>
<td>11</td>
<td>29.0</td>
<td>8</td>
<td>23.5</td>
</tr>
<tr>
<td>12 (H.S. Grad.)</td>
<td>14</td>
<td>36.8</td>
<td>14</td>
<td>41.2</td>
</tr>
<tr>
<td>13 - 15</td>
<td>1</td>
<td>2.6</td>
<td>4</td>
<td>11.8</td>
</tr>
<tr>
<td>16 (Coll. Grad.)</td>
<td>1</td>
<td>2.6</td>
<td>2</td>
<td>5.9</td>
</tr>
<tr>
<td>Over 16</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Total</td>
<td>38*</td>
<td>100.0</td>
<td>34**</td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td>Median = 10.45</td>
<td></td>
<td>Median = 12.2</td>
<td></td>
</tr>
<tr>
<td>Mother</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 - 8</td>
<td>17</td>
<td>24.3</td>
<td>1</td>
<td>2.9</td>
</tr>
<tr>
<td>9 - 11</td>
<td>31</td>
<td>44.2</td>
<td>7</td>
<td>20.6</td>
</tr>
<tr>
<td>12 (H.S. Grad.)</td>
<td>19</td>
<td>27.2</td>
<td>23</td>
<td>67.7</td>
</tr>
<tr>
<td>13 - 15</td>
<td>3</td>
<td>4.3</td>
<td>1</td>
<td>2.9</td>
</tr>
<tr>
<td>16 (Coll. Grad.)</td>
<td>0</td>
<td>0.0</td>
<td>2</td>
<td>5.9</td>
</tr>
<tr>
<td>Over 16</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>100.0</td>
<td>34</td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td>Median = 11.45</td>
<td></td>
<td>Median = 12.4</td>
<td></td>
</tr>
</tbody>
</table>

*Approximately 40 homes had an absent father.

**Low figure for this group because of necessity of long distance calls.

***Thirty-three unaccounted for.
of the Bexley mothers had done advanced work in school to lead all groups. Jackson was next with 26.7 percent. Mothers in the Chicago Avenue group who had any post high school educational experience were lowest at 4.3 percent.

**Occupation**

Table 5 is concerned with the occupational characteristics of the parents. There are six categories: professional; white collar; blue collar; farm; unemployed; and other, which includes retired, disabled/social security, student, foster parent, military and self-employed.

In the professional category, Bexley (34.2 percent) was separated by a wide margin from the other three groups. Jackson was second with 9.7 percent, Mohawk had 6.1 percent followed by Chicago Avenue with 2.5 percent professionals. Only 6.1 percent of the fathers in the rural area gave their occupation as farm.

Bexley white collar fathers represented 44.7 percent of the total. The next highest percentage in the white collar class was Jackson and Mohawk tied with 24.2 percent fathers in the white collar class. Chicago Avenue only had 7.5 percent of its fathers in this class.

The largest percentage of fathers who were blue collar (63.6 percent) was in the Mohawk School District. The lowest percentage (15.8 percent) was found in Bexley.
Table 5

Occupational Characteristics of Parents by School

<table>
<thead>
<tr>
<th>Type of Occupation</th>
<th>Chicago Ave. (Central City)</th>
<th>Mohawk School Dist. (Rural)</th>
<th>Bexley-Montrose (Suburban)</th>
<th>Jackson (Appalachia)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td>Father</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional</td>
<td>1</td>
<td>2.5</td>
<td>2</td>
<td>6.1</td>
</tr>
<tr>
<td>White Collar</td>
<td>3</td>
<td>7.5</td>
<td>8</td>
<td>24.2</td>
</tr>
<tr>
<td>Blue Collar</td>
<td>22</td>
<td>55.0</td>
<td>21</td>
<td>63.6</td>
</tr>
<tr>
<td>Farm</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Unemployed*</td>
<td>3</td>
<td>7.5</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Other**</td>
<td>11</td>
<td>27.5</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>100.0</td>
<td>33</td>
<td>100.0</td>
</tr>
</tbody>
</table>

| Mother             |        |         |        |         |        |         |        |         |
|--------------------|-----------------------------|-----------------------------|---------------------------|----------------------|
|                    | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| Professional       | 0      | 0.0     | 0      | 0.0     | 12     | 34.2    | 1      | 5.9     |
| White Collar       | 15     | 45.5    | 8      | 66.7    | 22     | 62.9    | 7      | 41.2    |
| Blue Collar        | 1      | 3.0     | 4      | 33.3    | 0      | 0.0     | 1      | 5.9     |
| Farm               | 0      | 0.0     | 0      | 0.0     | 0      | 0.0     | 0      | 0.0     |
| Unemployed*        | 16     | 48.5    | 0      | 0.0     | 1      | 2.9     | 1      | 5.9     |
| Other              | 1      | 3.0     | 0      | 0.0     | 0      | 0.0     | 7      | 41.2    |
| Total              | 33     | 100.0   | 12     | 100.0   | 35     | 100.0   | 17     | 100.1   |

*Welfare - ADC
**Retired; disabled/social security; student; military; foster parent; self-employed.
Chicago Avenue had 55.0 percent and Jackson had 42.0 percent blue collar, respectively.

A large part of the 27.5 percent in the "other" category in the Chicago Avenue group was attributed to being disabled or retired. A similar finding was in the Jackson group, who reported 24.1 percent in the "other" category.

Bexley mothers were the only group who were significantly involved in a professional occupation (34.2 percent). There were none in Chicago Avenue and Mohawk District. One person in the Jackson group (5.9 percent) reported having a professional-type occupation. A large percentage (41.2 percent) responded in the "other" category in Jackson. This was attributed to the majority of seven women being students or self-employed.

More mothers in all four areas were working in white collar jobs than blue collar jobs. Sixty-six and seven tenths percent in the Mohawk District who reported having an occupation were in this class. (Bexley-Montrose with 62.9 percent of mothers employed as white collar workers was followed by Chicago Avenue with 45.5 percent of mothers in the white collar category.) Jackson had the smallest proportion of mothers working. Slightly over 41 percent who were employed were involved in some type of white collar work.
Question two on the questionnaire was phrased "What type of work does the person do who supports the family?". The term "housewife" was not used by the female respondents, who were not employed but head of a household, to indicate a type of occupation. The most common response for a female who was unemployed but head of a household was "Aid to Dependent Children".

The researcher chose to label those who indicated a support source of ADC as "unemployed".

**Number of Years in School District**

Table 6 presents the length of time that the families have lived in the present school district. The highest median years was 15.5 in the Mohawk School District. Jackson had the next highest median of 9.3 years.

Chicago Avenue had a median residence of 7.7 years. Bexley-Montrose showed the greatest mobility with the lowest median of 6.4 years. In the Bexley area, 76.8 percent had lived there less than 10 years. Comparably, 61.8 percent had lived in the Chicago Avenue area less than 10 years; while 35.3 percent in the Mohawk District and 53.3 percent in Jackson had resided in their respective districts less than 10 years.
### Table 6

Length of Time Lived in School District by School

<table>
<thead>
<tr>
<th>Years</th>
<th>Chicago Ave. (Central City)</th>
<th>Mohawk School Dist. (Rural)</th>
<th>Bexley-Montrose (Suburban)</th>
<th>Jackson (Appalachia)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td>1 - 5</td>
<td>25</td>
<td>36.8</td>
<td>7</td>
<td>20.6</td>
</tr>
<tr>
<td>5 - 10</td>
<td>17</td>
<td>25.0</td>
<td>5</td>
<td>14.7</td>
</tr>
<tr>
<td>10 - 15</td>
<td>12</td>
<td>17.6</td>
<td>11</td>
<td>32.3</td>
</tr>
<tr>
<td>15 - 20</td>
<td>7</td>
<td>10.3</td>
<td>6</td>
<td>17.7</td>
</tr>
<tr>
<td>Over 20</td>
<td>7</td>
<td>10.3</td>
<td>5</td>
<td>14.7</td>
</tr>
<tr>
<td>Total</td>
<td>68</td>
<td>100.0</td>
<td>34</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Median = 7.65  Median = 15.45  Median = 6.42  Median = 9.26
Family Income

Table 7 shows the range of family income by school. Chicago Avenue revealed that 50.7 percent had an income of less than $5,000 a year. This was in contrast to 3.0 percent for Mohawk; 1.2 percent for Bexley; and 4.2 percent for Jackson in the lowest category.

The Chicago Avenue families who were in the $5,000-$10,000 category represented 31.5 percent of the respondents. Mohawk and Jackson families had similar percentages (27.3 percent and 26.4 percent respectively) in the above category, while Bexley-Montrose had 9.9 percent. Families whose income was over $15,000 in the Bexley area represented 67.9 percent.

The 1970 Census reported a median income of $14,390 for Bexley. The Jackson median income in 1970 was $7,641. In this study, 41.7 percent of the Jackson families reported income over $15,000, while 27.7 percent had income over $10,000. The Mohawk families were higher in reported income than the 1970 Census median income of $8,679 for the entire Wyandot County. Forty-two and four-tenths percent had income between $10,000 and $15,000, and 27.3 percent had an income of over $15,000. Higher incomes would be expected when compared with 1970 Census data due to the rate of inflation that the country has been experiencing for the last seven years.
Table 7
Family Income by School

<table>
<thead>
<tr>
<th>Income</th>
<th>Chicago Ave. (Central City)</th>
<th>Mohawk School Dist. (Rural)</th>
<th>Bexley-Montrose (Suburban)</th>
<th>Jackson (Appalachia)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td>0 - 5,000</td>
<td>37</td>
<td>50.7</td>
<td>1</td>
<td>3.0</td>
</tr>
<tr>
<td>5,000 - 10,000</td>
<td>23</td>
<td>31.5</td>
<td>9</td>
<td>27.3</td>
</tr>
<tr>
<td>10,000 - 15,000</td>
<td>12</td>
<td>16.4</td>
<td>14</td>
<td>42.4</td>
</tr>
<tr>
<td>Over 15,000</td>
<td>1</td>
<td>1.4</td>
<td>9</td>
<td>27.3</td>
</tr>
<tr>
<td>Total</td>
<td>73</td>
<td>100.0</td>
<td>33</td>
<td>100.0</td>
</tr>
<tr>
<td>Median</td>
<td>4,932</td>
<td>Median = 12,678</td>
<td>Median = 17,646</td>
<td>Median = 14,250</td>
</tr>
</tbody>
</table>
Summary

The socio-economic factors of education, occupation, rate of mobility, and family income related to parents, express suggestive inferences.

Past research has shown (Landis, 1949) that the higher level of parents' education, the greater the likelihood that the child would have a satisfactory emotional adjustment. Dager (1956) found that frequent changes in residence and broken homes were not conducive to high scores on the California Test of Personality.

Economic status also seems to be related. Those students whose personality scores changed significantly in a positive direction were in the upper two classes.

Both of the above studies involved students who were college age and high school seniors, respectively.

It is interesting to note that 58 percent of the Chicago Avenue fathers who were present in the home had not graduated from high school, and 68.5 percent of the mothers were high school drop-outs. Forty homes had a mother who was a single parent, and 48.5 percent received welfare subsistence payments. Over 50 percent of the families had an annual income under $5,000.

The above data was in contrast to the Bexley-Montrose parents. Over 80 percent of the fathers in this school district had gone beyond high school. The mothers
represented 63.7 percent who had more than a high school education. In the professional class, 34.2 percent of the fathers and 34.2 percent of the mothers were in this category. The family income was much higher than the Chicago Avenue group. Over 67 percent had an annual income over $15,000.

Although the socio-economic variables were not correlated with the test scores in this study, one would expect, from past research, that they would represent intervening variables with high influence.

The expectation was that the areas with the highest levels of education, income and occupation would exhibit the highest scores of personal and social adjustment; and that their differences would be significant.

The pattern of high scores related to higher level of living was not consistent. At times, the inner-city school had higher scores than the rural schools; and the Appalachian school had higher scores than the suburban school.
Chapter VI

FINDINGS RELATED TO ADJUSTMENT

Introduction

In the first study (Mangus, 1948), one instrument (The California Test of Personality, elementary series) was utilized for both grades. The statistical strategy was to compare the means of the scores of the two major sections (personal and social adjustment) and the twelve subtests by area and sex. Critical ratios were computed to determine significant differences between the areas based on the scores.

In the present study, two instruments with two different ranges of scores were utilized. Although they had the same general name (The California Test of Personality), they differed in that they were two different series (primary-third grade and elementary-sixth grade).

The statistical strategy for the present study was in part similar to Mangus'. A comparison of means of scores by area and sex were made but the tests of significance were of a different statistical technique.
A comparison of means of the various subtests was presented only in a descriptive manner in this study.

To test the null hypothesis between area, sex and no interaction of area/sex the following statistical procedure was followed.

The Pearson r coefficient and multivariate ANOVA were selected as appropriate statistical procedures for the process of testing the null hypothesis. The Pearson r was employed to ascertain whether there was a relationship between the two dependent variables, personal adjustment and social adjustment. A relatively high correlation (.70 - third grade; .72 - sixth grade) was found. In light of these correlations, it was decided that a multivariate ANOVA on the dependent variables as a bivariate rather than univariate was the proper statistic.

In univariate ANOVA, the optimal testing criterion is generally agreed to be an F test of the sample variance ratio. However, in MANOVA, alternative criteria have been proposed for testing the same hypothesis; and these criteria do not always yield the same results in p dimensions. "P" equals the number of dependent variables. In this study, there were two dependent variables, personal adjustment and social adjustment, computed bivariately (yly2). Hence, p would equal 2. If (y1) (y2) were the dependent variables, then p would equal 1. For p equals 1, all the testing
criteria become identical.

One criterion is the trace criterion (sum of roots).

\[ \text{trace } BW^{-1} \quad (\text{Winer, 1962, p. 236}) \]

"B" is equivalent to the H parameter in SAS that specifies which effects in the preceding model are to be used as hypothesis matrices. In this study, the matrices were area, sex and the interaction of area and sex. "W" is equivalent to the E parameter which represents the error effect.

The trace criterion involves the use of Hotelling To\(^2\) statistic. It can be used for large sample sizes such as this study. For this study, two criterion tests were utilized: Hotelling-Lawley Trace and Pillai Trace. The .05 level of probability was adopted as the significance level for failing to reject the null hypothesis.

**Relationship between Personal Adjustment and Social Adjustment Tests**

The first step was to determine if there was a relationship between the personal adjustment scores and the social adjustment scores for each grade. The findings would determine whether a univariate or bivariate approach was in order.

Table 8 presents the correlation between the two tests for the two grades. As the data in the table indicates, there is a strong relationship. Evidence of such a
relationship means that the two tests are not independent of each other. The scores of personal adjustment influence the scores of social adjustment. Since there is dependence between the two tests, they should be analyzed as a bivariate dependent variable as opposed to two unrelated dependent variables.

Table 8
Partial Correlation Coefficients of Two Tests by Grade

<table>
<thead>
<tr>
<th>Tests &amp; Grade</th>
<th>Test</th>
<th>Personal Adjustment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Third Grade</td>
<td>Social Adjustment</td>
<td>$r = .701$</td>
</tr>
<tr>
<td></td>
<td>DF = 169</td>
<td></td>
</tr>
<tr>
<td>Sixth Grade</td>
<td>Social Adjustment</td>
<td>$r = .719$</td>
</tr>
<tr>
<td></td>
<td>DF = 169</td>
<td></td>
</tr>
</tbody>
</table>

Comparison of Mean Adjustment Scores for Third and Sixth Grade by Area

Table 9 illustrates the different means obtained by the four groups on personal and social adjustment tests and their respective standard deviations for the third graders. The mean scores were not far apart on personal adjustment. The Bexley group had a mean score of 31.8, as compared to
Table 9

Comparison of Mean Adjustment Scores for Third Grade Children by Area

<table>
<thead>
<tr>
<th>Area</th>
<th>Number of Children</th>
<th>Personal Adjustment*</th>
<th>Social Adjustment**</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean Score</td>
<td>Standard Deviation</td>
</tr>
<tr>
<td>Central City</td>
<td>42</td>
<td>29.1</td>
<td>6.7</td>
</tr>
<tr>
<td>Columbus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Wyandot</td>
<td>41</td>
<td>28.1</td>
<td>8.3</td>
</tr>
<tr>
<td>County</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bexley</td>
<td>52</td>
<td>31.8</td>
<td>8.9</td>
</tr>
<tr>
<td>Jackson City</td>
<td>42</td>
<td>31.4</td>
<td>6.0</td>
</tr>
</tbody>
</table>

Hotelling-Lawley Trace: $F = 2.14$; $p < .05$; sig.
Pillai's Trace: $F= 2.16$; $p < .05$; sig.

*Scores range from 0 to 96

**Scores range from 0 to 96
Jackson (31.4); central-city Columbus (29.1); and upper Wyandot County (28.1). The social adjustment scores had a greater variance; and the four areas did not have the same sequence of high to low scores. Jackson City had the highest social adjustment mean (34.5), Bexley was next with 33.0. Upper Wyandot County showed a social adjustment mean score of 31.0, while central-city Columbus had the lowest, 30.7.

Table 10 presents adjustment data for the sixth grade classes. (There needed to be two sets of data for the same comparison since the primary series has a different range of scores than the elementary series. This same pattern will follow for all subsequent tables.)

On personal adjustment, Bexley sixth graders had the highest mean score (52.6) and central-city Columbus had the lowest (43.8). The social adjustment scores followed a similar sequence with Bexley highest (55.4) and upper Wyandot County and central-city Columbus tied (48.7) in the third and fourth positions. There was more variability among students' scores for personal adjustment than for social adjustment.

To answer the question of whether rural children had a higher level of personality adjustment than urban children, specific hypotheses were formulated for each grade.
Table 10
Comparison of Mean Adjustment Scores for Sixth Grade Children by Area

<table>
<thead>
<tr>
<th>Area</th>
<th>Number of Children</th>
<th>Personal Adjustment*</th>
<th>Social Adjustment**</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean Score</td>
<td>Standard Deviation</td>
</tr>
<tr>
<td>Central City Columbus</td>
<td>41</td>
<td>43.8</td>
<td>11.0</td>
</tr>
<tr>
<td>Upper Wyandot County</td>
<td>55</td>
<td>46.6</td>
<td>10.4</td>
</tr>
<tr>
<td>Bexley</td>
<td>30</td>
<td>52.6</td>
<td>10.3</td>
</tr>
<tr>
<td>Jackson City</td>
<td>52</td>
<td>47.3</td>
<td>11.3</td>
</tr>
</tbody>
</table>

Hotelling-Lawley Trace: $F = 1.82; p > .05; \text{n.s.}$
Pillai's Trace: $F = 1.81; p > .05; \text{n.s.}$

*Scores range from 0 to 144
**Scores range from 0 to 144
Specific Hypothesis 1: (Third Grade)

Personal and social adjustment scores of children in Mohawk School District will be higher than the personal and social adjustment scores of children in attendance at Chicago Avenue Elementary and Montrose Elementary as measured by the California Test of Personality (Primary and Elementary Series, Form AA).

Table 9 illustrated the comparative mean adjustment scores for third grade by area. According to that table, the rural area was lowest in personal adjustment scores (28.1) when compared with Bexley (31.8) and inner-city Columbus (29.1). In social adjustment, the rural area scored lower (31.0) than Bexley (33.0), but was higher than the inner-city (30.7).

Therefore, hypothesis 1 was rejected except for social adjustment of Chicago Avenue Elementary at the third grade.

Specific Hypothesis 2: (Third Grade)

Personal and social adjustment scores of children in Mohawk School District were higher than the personal and social adjustment scores at Kinnison School as measured by the California Test of Personality (Primary and Elementary Series, Form AA).

The Jackson City school had a mean score of 31.4 in personal adjustment as compared to 28.1 for Mohawk School
District. The Jackson City school also had a higher mean score in social adjustment (34.5 to 31.0 for Mohawk School District).

Therefore, Hypothesis 2 was rejected for the third grade.

Specific Hypothesis 3: (Sixth Grade)

Personal and social adjustment scores of children in Mohawk School District will be higher than the personal and social adjustment scores of children in attendance at Chicago Avenue Elementary and Montrose Elementary as measured by the California Test of Personality (Primary and Elementary Series, Form AA).

The Mohawk School District children did not score higher in personal and social adjustment than Montrose Elementary. The rural children did do better than the inner-city children on personal adjustment (46.6 to 43.8); but in social adjustment, the two schools tied with a mean score of 48.7.

Therefore, specific hypothesis 3 was not totally rejected.

Specific Hypothesis 4: (Sixth Grade)

Personal and social adjustment scores of children in Mohawk School District will be higher than the personal and social adjustment scores at Kinnison School as measured by
the California Test of Personality (Primary and Elementary Series, Form AA).

The children in Mohawk School District did not receive higher personal and social adjustment scores than the children at Kinnison School.

Therefore, specific hypothesis 4 was not confirmed.

In the beginning of this dissertation, a general hypothesis was stated. "The personality adjustment of individuals is related to their type of residence: rural or urban. A rural-type residence is conducive to better personal and social adjustment. Factors of lower numbers, lower density and lesser heterogeneity will contribute to higher adjustment."

To test the effect of area at the third grade level for significance, the two tests utilized both show ratios of 2.14 and 2.16 respectively. These ratios were significant at the .05 level (as seen in Table 9). It would follow then that a null hypothesis of no difference between areas would be rejected; and there would be significant difference between the four areas on their personal and social adjustment at the third grade level. Therefore, the first part of the general hypothesis would be supported for the third grade.

The general hypothesis for the sixth grade was not supported. This was in contrast to the third grade where
a significance was met. To test the effect of area for significance, the two tests, Hotelling-Lawley Trace and Pillai's Trace, show F ratios of 1.82 and 1.81 respectively as shown in Table 10. Both ratios are not significant at the .05 level. Thus, the null hypothesis of no difference between areas for sixth graders would be accepted. The scores obtained by the sixth graders in all areas were not significantly different.

Summary

The mean scores on personal adjustment for the third grade ranged from 28.1 (rural) to 31.8 (suburb). For social adjustment, the range was 30.7 (inner-city) to 34.5 (Appalachia).

The sixth grade did not exhibit as close a range of scores as the third grade, nor were the areas the same lows and highs as in the third grade. The personal adjustment scores ranged from 43.8 (inner city) to 52.6 (suburb). The range for social adjustment scores was 48.7 (rural and inner-city) to 55.4 (suburb).

In contrast to Mangus' study, the rural areas in both the third and sixth grades did not have the highest mean scores in personal and social adjustment. In the third grade, the suburb and small city in Appalachia had the highest mean scores in personal and social adjustment respectively. The sixth grade suburb had the highest mean
scores in personal and social adjustment with the Appalachian city of Jackson second.

In table form, the differences appear striking between the areas in the sixth grade. Yet, the tests of statistical significance were not met. This was in contrast to the Mangus study where there were significant differences for both grades.

It was different for the third grade. The tests of statistical significance at the .05 level were met, but the significance levels achieved were close to .05 level for acceptance of no difference.

Specific Hypothesis 1 was rejected except in the area of social adjustment. The rural scores in this area were higher than the scores of Chicago Avenue Elementary.

Specific Hypothesis 2 was rejected and Specific Hypothesis 3 was not totally rejected since the sixth grade rural children did better than the inner-city children in personal adjustment; and the two groups tied in social adjustment.

Specific Hypothesis 4 was not confirmed at the sixth grade level.
Comparison of Mean Adjustment Scores
for Third and Sixth Grades
by Area and Sex

The data reported in Table 11 indicate that third grade girls, with one exception, had higher scores on personal adjustment than third grade boys. Bexley boys had a mean score of 34.4, as compared to girls' 29.3. The same pattern occurred on social adjustment.

Table 12 does not show the same consistency between the sexes. Except in Central City Columbus, both sexes in the sixth grade have approximately the same scores on personal adjustment. The girls show a slight superiority in mean scores. In the Central City, boys scored higher (mean = 47.8) than girls (mean = 41.8).

The social adjustment scores do not reveal the same pattern that was seen in the personal adjustment scores. Sixth grade girls from Bexley, Jackson and upper Wayndot County scored higher than their counterparts. Bexley was highest (58.8 mean score) and upper Wyandot boys were lowest (47.8 mean score). A reversal was found in Central City Columbus. Boys scored higher (50.6 mean score) than their female classmates (47.8 - mean score).

To answer questions concerning area and sex interaction effect and sex differences, specific hypotheses were drafted.
Table 11
Comparison of Mean Adjustment Scores for Third Grade Children by Area and Sex

<table>
<thead>
<tr>
<th>Sex &amp; Test</th>
<th>Mean Score</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Central City</td>
<td>Upper Wyandot County</td>
</tr>
<tr>
<td>Boys</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal Adjustment</td>
<td>N = 17</td>
<td>N = 21</td>
</tr>
<tr>
<td>Social Adjustment</td>
<td>N = 25</td>
<td>N = 20</td>
</tr>
<tr>
<td>Girls</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal Adjustment</td>
<td>N = 25</td>
<td>N = 20</td>
</tr>
<tr>
<td>Social Adjustment</td>
<td>N = 25</td>
<td>N = 20</td>
</tr>
</tbody>
</table>

Hotelling-Lawley Trace: $F = 1.53; p > .05; \text{n.s}$
Pillai's Trace: $F = 1.52; p > .05; \text{n.s}$
Table 12

Comparison of Mean Adjustment Scores for Sixth Grade Children by Area and Sex

<table>
<thead>
<tr>
<th>Sex &amp; Test</th>
<th>Mean Score</th>
<th></th>
<th></th>
<th>Standard Deviation</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Central City</td>
<td>Upper Wyandot</td>
<td>Bexley</td>
<td>Central City</td>
<td>Upper Wyandot</td>
<td>Bexley</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Columbus</td>
<td>County</td>
<td>City</td>
<td>Columbus</td>
<td>County</td>
<td>City</td>
</tr>
<tr>
<td>Boys</td>
<td></td>
<td>N = 14</td>
<td>N = 31</td>
<td>N = 12</td>
<td>N = 25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal Adjustment</td>
<td>47.8</td>
<td>46.4</td>
<td>52.5</td>
<td>47.2</td>
<td>7.0</td>
<td>10.6</td>
<td>12.0</td>
</tr>
<tr>
<td>Social Adjustment</td>
<td>50.6</td>
<td>47.8</td>
<td>53.3</td>
<td>48.1</td>
<td>10.4</td>
<td>9.0</td>
<td>11.7</td>
</tr>
<tr>
<td>Girls</td>
<td></td>
<td>N = 27</td>
<td>N = 24</td>
<td>N = 18</td>
<td>N = 27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal Adjustment</td>
<td>41.8</td>
<td>46.8</td>
<td>52.7</td>
<td>47.3</td>
<td>12.1</td>
<td>10.4</td>
<td>9.4</td>
</tr>
<tr>
<td>Social Adjustment</td>
<td>47.8</td>
<td>49.9</td>
<td>58.8</td>
<td>53.4</td>
<td>9.5</td>
<td>10.0</td>
<td>8.0</td>
</tr>
</tbody>
</table>

Hotelling-Lawley Trace: $F = 1.45; p > .05; n.s.$
Pillai's Trace: $F = 1.45; p > .05; n.s.$
Specific Hypotheses 5 and 6 were concerned with the effect of the interaction of area and sex for the third and sixth grades respectively.

Those hypotheses and the particular conclusions are:

Specific Hypothesis 5: (Third Grade)

Sex and area will have an interaction that will affect the scores obtained on personal and social adjustment sections of the California Test of Personality (Primary and Elementary Series, Form AA).

There was no interaction between area and sex. In both test criteria, F ratios were obtained that exceeded the significance level of .05. Therefore, the null hypothesis of no interaction was accepted, and the alternative hypothesis as stated in hypothesis 5 was rejected for the third grade.

Specific Hypothesis 6: (Sixth Grade)

Sex and area will have an interaction that will affect the scores obtained on personal and social adjustment sections of the California Test of Personality (Primary and Elementary Series, Form AA).

As with the third graders, there was no interaction between area and sex. As far as personality adjustment and sex/area is concerned, it does not make a difference whether a boy or girl lives in a rural or urban area.
Hypothesis 6 was rejected at the sixth grade level.

As a whole, third grade boys and girls scored approximately the same on personal adjustment; girls scored higher (33.3 mean score) as compared to a 31.4 mean score for boys on social adjustment. In the sixth grade, boys had a higher mean score (47.8) on personal adjustment than girls (46.6). Social adjustment was just the reverse. Girls had a mean score of 52.0, as compared to a mean score of 48.7 for boys. Tables 13 and 14 illustrate the above data. Specific hypotheses 7 and 8 are related to the question of sex differences.

The hypotheses are as follows:

**Specific Hypothesis 7: (Third Grade)**

Personal and Social Adjustment scores of females will be higher than the personal and social adjustment scores of males as measured by the California Test of Personality (Primary and Elementary Series, Form AA).

The difference between the sexes was significant at the .05 level in both tests. The null hypothesis of no difference between males and females on their test scores is rejected.

However, hypothesis 7 was not totally supported. Girls in the third grade had higher mean scores than their male peers on social adjustment; but in the area of personal
### Table 13
Comparison of Mean Adjustment Scores for Third Grade Boys and Girls

<table>
<thead>
<tr>
<th>Test</th>
<th>Mean Score</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boys</td>
<td>Girls</td>
</tr>
<tr>
<td>Personal Adjustment</td>
<td>30.4</td>
<td>30.0</td>
</tr>
<tr>
<td>Social Adjustment</td>
<td>31.4</td>
<td>33.3</td>
</tr>
</tbody>
</table>

Hotelling-Lawley Trace: $F = 4.31; p < .05$; sig.
Pillai's Trace: $F = 4.31; p < .05$; sig.

### Table 14
Comparison of Mean Adjustment Scores for Sixth Grade Boys and Girls

<table>
<thead>
<tr>
<th>Test</th>
<th>Mean Score</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boys</td>
<td>Girls</td>
</tr>
<tr>
<td>Personal Adjustment</td>
<td>47.8</td>
<td>46.6</td>
</tr>
<tr>
<td>Social Adjustment</td>
<td>48.7</td>
<td>52.0</td>
</tr>
</tbody>
</table>

Hotelling-Lawley Trace: $F = 7.69; p < .05$; sig.
Pillai's Trace: $F = 7.69; p < .05$; sig.
adjustment, the boys had a slight margin.

Tables 13 and 14 present the mean adjustment scores for both third and sixth grade boys and girls.

**Specific Hypothesis 8: (Sixth Grade)**

Personal and social adjustment scores of females will be higher than the personal and social adjustment scores of males as measured by the California Test of Personality (Primary and Elementary Series, Form AA).

The difference between the sexes in the sixth grade was significant at the .05 level. There was a difference between the sexes on their test scores. Hypothesis 8 was not totally confirmed since girls had a higher mean score for social adjustment but scored lower on personal adjustment (see Table 14).

**Summary**

Girls in the third grade in all areas except Bexley had a higher mean personal adjustment score than the boys in the corresponding area and grade. In social adjustment, the pattern was the same.

The girls in the sixth grade had a higher mean score in personal adjustment except in the inner-city school where the boys had higher mean scores. The same exception held true for social adjustment. The boys in the inner-city school scored higher than the girls; whereas the other three
areas showed a slight female superiority.

In Mangus' study, girls in the third and sixth grades had a higher mean score in personal and social adjustment than the boys in the same grades.

In regard to a rural advantage in this study, there was no general superiority exhibited by rural boys and girls in the two grades. Sixth grade rural boys had the lowest mean score in personal and social adjustment of the four groups.

Rural sixth grade girls were next to last in mean score achieved in personal and social adjustment. Third grade rural boys were lowest in personal and social adjustment; while their female peers tied with Bexley girls in last place in personal adjustment, and were second in social adjustment.

Specific hypotheses 5 and 6 were rejected. Specific hypotheses 7 and 8 were not totally confirmed as there was an inconsistency on the part of the girls in both grades.

The preceding analysis was very different in determining significant differences between the areas, sex, and area/sex interaction that was done in the first study. In the study by Mangus, group differences were computed by categorizing the three groups into three pairs. For example, farm-city; farm-village; and village-city. Difference in mean scores on self-adjustment and social adjustment was
divided by the standard error of difference. The quotient was labeled the critical ratio (C.R.). In interpreting the critical ratio, it was customary to consider difference twice as great as its standard error indicative of a statistically significant difference. A difference that great in relation to its standard error would have the probability of occurring only five times in one hundred repeated samples (Mangus, 1949, p. 9).

This means of testing hypotheses was not to be found in a number of current statistics texts (Downie & Heath, 1974; Elzey, 1971). A 1951 statistics text authored by Dixon and Massey failed to discuss the above theory in its chapters on hypothesis testing.

The analysis of variance employed in the present study is considered to be a more appropriate test than critical ratio.

A strong relationship was found to exist between the two tests, personal and social adjustment. In light of this relationship, the two tests were analyzed bivariately in a multivariate analysis of variance.

Test criteria for the hypothesis of overall effect of area, sex and area/sex for the third and sixth grades were as follows:

1) There was a significant difference between areas in the third grade, but not in the sixth grade.
2) There was no effect from an interaction of sex and area in both grades.

3) Significant differences existed between the sexes in both grades.

**Comparison of Mean Adjustment Scores of Subtests for Third and Sixth Grade Boys**

Although there will be no analysis of variance as far as the subtests are concerned, their mean adjustment scores are given as a basis of comparison with the original analysis of the Mangus investigation.

Third grade boys in Bexley achieved a higher mean score (34.4) than all other boys in the same grade on personal adjustment. If the scores are broken down into the different subtests as shown in Table 15, only three subtests out of six show any marked difference.

Except for upper Wyandot County, the scores for sense of personal worth and feeling of belonging are very close. In the area of nervous symptoms, Bexley and Central City Columbus are almost identical (5.2 mean score to 5.1 mean score), and Jackson and upper Wyandot County each have a mean score of 4.8.

On the social adjustment section, Bexley boys were slightly ahead of Jackson boys (33.2 to 33.0). Upper Wyandot County boys scored higher in more subtests of social adjustment than they did on personal adjustment. On social
Table 15

Comparison of Mean Adjustment Scores of Subtests for Third Grade Boys by Area

<table>
<thead>
<tr>
<th>Sex &amp; Test</th>
<th>Mean Score</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Central City</td>
<td>Upper Wyandot County</td>
</tr>
<tr>
<td>Boys</td>
<td>N = 17</td>
<td>N = 21</td>
</tr>
<tr>
<td>Personal Adjustment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Reliance</td>
<td>28.7</td>
<td>27.1</td>
</tr>
<tr>
<td>Sense - Personal Worth</td>
<td>5.1</td>
<td>4.7</td>
</tr>
<tr>
<td>Sense - Personal Freedom</td>
<td>5.3</td>
<td>4.5</td>
</tr>
<tr>
<td>Feeling of Belonging</td>
<td>5.6</td>
<td>4.8</td>
</tr>
<tr>
<td>Withdrawing Tendencies</td>
<td>3.2</td>
<td>3.1</td>
</tr>
<tr>
<td>Nervous Symptoms</td>
<td>5.1</td>
<td>4.8</td>
</tr>
<tr>
<td>Social Adjustment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Standards</td>
<td>29.6</td>
<td>28.7</td>
</tr>
<tr>
<td>Social Skills</td>
<td>5.6</td>
<td>5.9</td>
</tr>
<tr>
<td>Anti-social Tendencies</td>
<td>5.2</td>
<td>4.4</td>
</tr>
<tr>
<td>Family Relations</td>
<td>3.6</td>
<td>3.6</td>
</tr>
<tr>
<td>School Relations</td>
<td>5.1</td>
<td>4.8</td>
</tr>
<tr>
<td>Community Relations</td>
<td>5.1</td>
<td>5.6</td>
</tr>
</tbody>
</table>
standards, they were slightly ahead of Central City Columbus (5.9 to 5.6), the same (3.6) on anti-social tendencies with the inner-city school, and scored 5.6 to 5.1 on community relations with Chicago Avenue.

As with the third grade, boys in the sixth grade, indicated in Table 16, at Bexley scored the highest (52.5 mean score) on personal adjustment. The greatest differences in the various components occurred in self-reliance (7.9 to 6.6 for the rural and inner-city groups); withdrawing tendencies (7.9 to 6.6 for rural and small city of Jackson); and nervous symptoms (9.6 to 6.5 for Jackson).

The social adjustment components for this grade of boys indicate no overall superiority by one group. The inner-city sample showed a slim margin in social standards, social skills and anti-social tendencies. In school relations and community relations, the same group was lower than Bexley. The family relations component revealed greater differences between the four groups with the Central City school achieving the highest mean score (9.1) to 8.4 for the other three.

Comparison of Mean Adjustment Scores of Subtests for Third and Sixth Grade Girls

Tables 17 and 18 present similar data for third and sixth grade girls. Third grade girls in Jackson, as illustrated in Table 17, scored higher than the other groups
### Table 16
Comparison of Mean Adjustment Scores of Subtests for Sixth Grade Boys by Area

<table>
<thead>
<tr>
<th>Sex &amp; Test</th>
<th>Mean Score</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Central City</td>
<td>Upper Wyandot County</td>
</tr>
<tr>
<td>Boys</td>
<td>N = 14</td>
<td>N = 31</td>
</tr>
<tr>
<td>Personal Adjustment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Reliance</td>
<td>47.8</td>
<td>46.4</td>
</tr>
<tr>
<td>Sense - Personal Worth</td>
<td>6.6</td>
<td>6.6</td>
</tr>
<tr>
<td>Sense - Personal Freedom</td>
<td>8.1</td>
<td>7.4</td>
</tr>
<tr>
<td>Feeling of Belonging</td>
<td>9.1</td>
<td>8.3</td>
</tr>
<tr>
<td>Withdrawing Tendencies</td>
<td>9.3</td>
<td>9.1</td>
</tr>
<tr>
<td>Nervous Symptoms</td>
<td>7.1</td>
<td>6.6</td>
</tr>
<tr>
<td></td>
<td>7.6</td>
<td>8.5</td>
</tr>
<tr>
<td>Social Adjustment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Standards</td>
<td>50.6</td>
<td>47.8</td>
</tr>
<tr>
<td>Social Skills</td>
<td>9.6</td>
<td>9.4</td>
</tr>
<tr>
<td>Anti-social Tendencies</td>
<td>8.4</td>
<td>7.1</td>
</tr>
<tr>
<td>Family Relations</td>
<td>7.4</td>
<td>6.8</td>
</tr>
<tr>
<td>School Relations</td>
<td>9.1</td>
<td>8.6</td>
</tr>
<tr>
<td>Community Relations</td>
<td>9.0</td>
<td>9.2</td>
</tr>
</tbody>
</table>
Table 17
Comparison of Mean Adjustment Scores of Subtests for Third Grade Girls by Area

<table>
<thead>
<tr>
<th>Sex &amp; Test</th>
<th>Mean Score</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Central City</td>
<td>Upper Wyandot County</td>
</tr>
<tr>
<td>Girls</td>
<td>N = 25</td>
<td>N = 20</td>
</tr>
<tr>
<td>Personal Adjustment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Reliance</td>
<td>29.4</td>
<td>29.3</td>
</tr>
<tr>
<td>Sense - Personal Worth</td>
<td>4.5</td>
<td>5.3</td>
</tr>
<tr>
<td>Sense - Personal Freedom</td>
<td>6.2</td>
<td>5.3</td>
</tr>
<tr>
<td>Feeling of Belonging</td>
<td>5.9</td>
<td>5.3</td>
</tr>
<tr>
<td>Withdrawing Tendencies</td>
<td>5.8</td>
<td>5.1</td>
</tr>
<tr>
<td>Nervous Symptoms</td>
<td>3.4</td>
<td>3.9</td>
</tr>
<tr>
<td>Social Adjustment</td>
<td>31.4</td>
<td>33.5</td>
</tr>
<tr>
<td>Social Standards</td>
<td>6.0</td>
<td>6.7</td>
</tr>
<tr>
<td>Social Skills</td>
<td>5.4</td>
<td>5.4</td>
</tr>
<tr>
<td>Anti-social Tendencies</td>
<td>3.7</td>
<td>4.3</td>
</tr>
<tr>
<td>Family Relations</td>
<td>6.0</td>
<td>5.7</td>
</tr>
<tr>
<td>School Relations</td>
<td>4.8</td>
<td>5.2</td>
</tr>
<tr>
<td>Community Relations</td>
<td>5.6</td>
<td>6.3</td>
</tr>
</tbody>
</table>
Table 18

Comparison of Mean Adjustment Scores of Subtests for Sixth Grade Girls by Area

<table>
<thead>
<tr>
<th>Sex &amp; Test</th>
<th>Mean Score</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Central City</td>
<td>Upper Wyandot</td>
</tr>
<tr>
<td></td>
<td>Cities</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal Adjustment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td>41.8</td>
<td>46.8</td>
</tr>
<tr>
<td>N = 27</td>
<td>10.4</td>
<td>9.4</td>
</tr>
<tr>
<td>Self-Reliance</td>
<td>6.9</td>
<td>7.0</td>
</tr>
<tr>
<td>Sense - Personal Worth</td>
<td>8.0</td>
<td>8.3</td>
</tr>
<tr>
<td>Sense - Personal Freedom</td>
<td>7.4</td>
<td>9.1</td>
</tr>
<tr>
<td>Feeling of Belonging</td>
<td>7.8</td>
<td>8.5</td>
</tr>
<tr>
<td>Withdrawing Tendencies</td>
<td>5.9</td>
<td>6.5</td>
</tr>
<tr>
<td>Nervous Symptoms</td>
<td>5.8</td>
<td>7.5</td>
</tr>
<tr>
<td>Social Adjustment</td>
<td>47.8</td>
<td>49.9</td>
</tr>
<tr>
<td>Social Standards</td>
<td>9.7</td>
<td>9.9</td>
</tr>
<tr>
<td>Social Skills</td>
<td>8.3</td>
<td>8.3</td>
</tr>
<tr>
<td>Anti-social Tendencies</td>
<td>6.5</td>
<td>7.3</td>
</tr>
<tr>
<td>Family Relations</td>
<td>7.4</td>
<td>8.3</td>
</tr>
<tr>
<td>School Relations</td>
<td>7.2</td>
<td>7.0</td>
</tr>
<tr>
<td>Community Relations</td>
<td>8.6</td>
<td>9.1</td>
</tr>
<tr>
<td>N = 27</td>
<td>10.4</td>
<td>9.4</td>
</tr>
<tr>
<td>N = 24</td>
<td>10.4</td>
<td>9.4</td>
</tr>
<tr>
<td>N = 18</td>
<td>10.4</td>
<td>9.4</td>
</tr>
<tr>
<td>N = 27</td>
<td>10.4</td>
<td>9.4</td>
</tr>
</tbody>
</table>
in four out of six components of personal adjustment. Their social adjustment scores indicate superiority in four out of six factors.

Sixth grade girls' scores, as shown in Table 18, favor the Bexley contingent. In five out of six sections of personal adjustment, the Bexley girls scored the highest. They were slightly lower than Wyandot County in nervous symptoms. Their social adjustment scores were higher in all components except in social standards (10.3). Jackson had the same mean score.

As a basis for comparison, rural non-farm children in the 1948 study scored higher on all components of self-adjustment and social adjustment than their city peers. Farm children differed favorably from city children in every component of self-adjustment except in the area of personal freedom. Even though the mean score for city children was higher in the element of a sense of personal freedom, the means were very close.

Social adjustment subtests favored farm children except in social standards. Here again, the means were very close.

As was stated in the earlier chapter on methodology, all children in both grades were administered the elementary series. This series is, according to the manual, appropriate for grades 4 through 6.
Thus, a pure comparison is limited due to the fact that the children in the present study were given tests concerned with the same subjects, but constructed somewhat differently in the interest of validity.

Summary

In comparing the mean adjustment scores of the subtests for third and sixth grade boys, no one area was consistently highest in obtained scores.

The third grade boys in Bexley showed the highest scores in all six subtests of personal adjustment, whereas the social adjustment high scores were distributed between the groups.

In the sixth grade, the personal adjustment subtest scores favored Bexley, while the social adjustment subtests favored the inner-city in four out of six subtests.

The third grade Bexley girls did not score as well as their male peers in the subtests of personal adjustment. Jackson third grade girls scored highest on four out of six components of social adjustment.

In the sixth grade, the suburban girls exhibited a general superiority in both areas of subtests.

Rural boys and girls in 1948 differed favorably from city boys and girls in all components of personal and social adjustment. In the present study, there were only three instances where rural boys or girls displayed superiority.
Sixth grade rural girls had the highest scores in the areas of nervous symptoms and community relations. Third grade rural boys outscored the other three groups of peers in the field of community relations.

Analysis of Variance - Personal Adjustment
Third Grade

The data reported in Table 19 indicates that there is no significant difference between the areas, nor is there a difference that is significant between the sexes on personal adjustment scores in the third grade. A null hypothesis of no difference between areas would be accepted as would a null hypothesis of no difference between boys and girls.

There was an interaction between sex and area for this grade. A ratio of 2.73 is significant at .05 level. Therefore area and sex make a difference on personal adjustment.

Table 19

Analysis of Variance - Personal Adjustment
Third Grade

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Total Mean Square</th>
<th>F</th>
<th>PR F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>405.70</td>
<td>3</td>
<td>124.93</td>
<td>2.38</td>
<td>.07</td>
</tr>
<tr>
<td>Sex</td>
<td>3.11</td>
<td>1</td>
<td></td>
<td>0.05</td>
<td>.81</td>
</tr>
<tr>
<td>Sex/Area</td>
<td>465.72</td>
<td>3</td>
<td></td>
<td>2.73</td>
<td>.04*</td>
</tr>
</tbody>
</table>

*Significant at .05
Analysis of Variance - Social Adjustment
Third Grade

In analyzing the variance of the social adjustment scores in Table 20 for the primary grade, the one variable that made a difference was sex.

There was no significant difference between areas at the .05 level; and the interaction of sex and area made no difference on social adjustment.

Analysis of Variance - Personal Adjustment
Sixth Grade

Table 21 presents the amount of variance and its significance or non-significance on personal adjustment for the sixth grade. The area effect makes a difference for this grade level. An F ratio of 3.89 is significant at .05 level. In light of this significance, a null hypothesis of no differences between areas on personal adjustment in the sixth grade would be rejected. No significance was obtained for sex, and there was no interaction between area and sex.

Analysis of Variance - Social Adjustment
Sixth Grade

Table 22 indicates that there was a significant difference between areas and between the sexes on social adjustment in the sixth grade. Area and sex made no differences on social adjustment in the sixth grade.
Table 20  
Analysis of Variance - Social Adjustment  
Third Grade

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Total Mean Square</th>
<th>F</th>
<th>PR &gt; F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>412.81</td>
<td>3</td>
<td>116.18</td>
<td>2.41</td>
<td>.06</td>
</tr>
<tr>
<td>Sex</td>
<td>227.42</td>
<td>1</td>
<td>3.99</td>
<td>.04*</td>
<td></td>
</tr>
<tr>
<td>Sex/Area</td>
<td>173.08</td>
<td>3</td>
<td>1.01</td>
<td>.38</td>
<td></td>
</tr>
</tbody>
</table>

*Significant at .05

Table 21  
Analysis of Variance - Personal Adjustment  
Sixth Grade

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Total Mean Square</th>
<th>F</th>
<th>PR &gt; F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>1,372.55</td>
<td>3</td>
<td>243.94</td>
<td>3.89</td>
<td>.01*</td>
</tr>
<tr>
<td>Sex</td>
<td>53.72</td>
<td>1</td>
<td>.46</td>
<td>.50</td>
<td></td>
</tr>
<tr>
<td>Area/Sex</td>
<td>281.32</td>
<td>3</td>
<td>.80</td>
<td>.49</td>
<td></td>
</tr>
</tbody>
</table>

*Significant at .05
Table 22
Analysis of Variance - Social Adjustment
Sixth Grade

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Total Mean Square</th>
<th>F</th>
<th>PR</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>1,030.93</td>
<td>3</td>
<td>294.23</td>
<td>3.51</td>
<td>.01*</td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>413.17</td>
<td>1</td>
<td>4.23</td>
<td>.04*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Area/Sex</td>
<td>615.51</td>
<td>3</td>
<td>2.10</td>
<td>.10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant at .05

The above tables of univariate ANOVA illustrate how discrepant the findings were between the MANOVA and the above procedure. It was concluded that the present analysis provided a more appropriate interpretation than the previous study.

Summary

A strong relationship was found between the two tests, personal and social adjustment, for the two grades.

The general hypothesis of an overall effect of area on personality adjustment was supported for the third grade. F ratio of 2.14 and 2.16 were computed. Both figures were significant at the .05 level. There were differences between the means of the four schools and their respective area.
This was not the case for the sixth grade. F ratios obtained exceeded the .05 significance level. There were no differences between the means of the four schools at the sixth grade level.

In order to answer questions pertaining to rural superiority, female superiority and whether an interaction of sex/area makes a difference, specific hypotheses were formulated for the third and sixth grades. These hypotheses and conclusions made based on the results of the tests were as follows:

Specific Hypothesis 1: (Third Grade)

Personal and social adjustment scores of children in Mohawk School District will be higher than the personal and social adjustment scores of children in attendance at Chicago Avenue Elementary and Montrose Elementary as measured by the California Test of Personality (Primary and Elementary Series, Form AA).

The findings revealed that the rural area was lowest in personal adjustment scores; scored lower than Montrose Elementary in social adjustment, but exceeded Chicago Avenue Elementary in social adjustment.

Specific Hypothesis 1 was rejected except for the social adjustment scores of Chicago Avenue Elementary.
Specific Hypothesis 2: (Third Grade)

Personal and social adjustment scores of children in Mohawk School District will be higher than the personal and social adjustment scores at Kinnison School as measured by the California Test of Personality (Primary and Elementary Series, Form AA).

Kinnison School had higher mean scores than Mohawk School District in both personal and social adjustment.

Specific Hypothesis 2 was rejected.

Specific Hypothesis 3: (Sixth Grade)

Personal and social adjustment scores of children in Mohawk School District will be higher than the personal and social adjustment scores of children in attendance at Chicago Avenue Elementary and Montrose Elementary as measured by the California Test of Personality (Primary and Elementary Series, Form AA).

Rural children did not score higher than the suburban children. There was a split with the inner-city children. The rural children had higher scores in personal adjustment, but the inner-city had the same social adjustment scores as the rural children.

Specific Hypothesis 3 was not totally rejected.
Specific Hypothesis 4: (Sixth Grade)

Personal and social adjustment scores of children in Mohawk School District will be higher than the personal and social adjustment scores at Kinnison School as measured by the California Test of Personality (Primary and Elementary Series, Form AA).

The rural children did not have higher personality adjustment scores than the children in the small Appalachian city. Therefore, specific hypothesis 4 was not supported.

Specific Hypothesis 5: (Third Grade)

Sex and area will have an interaction that will affect the scores obtained on personal and social adjustment sections of the California Test of Personality (Primary and Elementary Series, Form AA).

There was no interaction between area/sex. F ratios exceeded the significance level of .05.

Specific Hypothesis 5 was rejected.

Specific Hypothesis 6: (Sixth Grade)

Sex and area will have an interaction that will affect the scores obtained on personal and social adjustment sections of the California Test of Personality (Primary and Elementary Series, Form AA).

There was no interaction between area and sex. Specific Hypothesis 6 was rejected.
Specific Hypothesis 7: (Third Grade)

Personal and social adjustment scores of females will be higher than the personal and social adjustment scores of males as measured by the California Test of Personality (Primary and Elementary Series, Form AA).

The difference between the sexes was significant at the .05 level for both tests. However, Specific Hypothesis 7 was not totally confirmed. Third grade girls outscored their male peers in social adjustment, but the boys held a slight margin in personal adjustment.

Specific Hypothesis 8: (Sixth Grade)

Personal and social adjustment scores of females will be higher than the personal and social adjustment scores of males as measured by the California Test of Personality (Primary and Elementary Series, Form AA).

This hypothesis was not totally confirmed. Girls had higher mean scores in social adjustment than the boys, but scored lower than boys in personal adjustment.

Analysis of variance of personal adjustment and social adjustment data for third and sixth grades was discussed. Discrepancies in findings between ANOVA and MANOVA were illustrated. It was concluded that MANOVA was the most appropriate test and more applicable to the interpretation of the findings.
Chapter VII

SUMMARY AND CONCLUSIONS

The purposes of this investigation were to:

1) measure the personal and social adjustment of third and sixth grade children residing in three urban-type areas and one rural area. The California Test of Personality (Primary and Elementary Series, Form AA) was the instrument of choice;

2) semi-replicate the Mangus (1948) study, "Personality Adjustment of Rural and Urban Children."

The present investigation is considered a semi-replication because the instrument used, although labeled the same, was not the exact one used originally. As was stated earlier, Mangus (1948) only used the elementary series for both grades. In this study, two series were employed; the primary for the third grade and the elementary for the sixth grade. These two series are considered appropriate by the authors of the California Test of Personality.
The sample in the present study was somewhat different than the original sample. Although both studies had rural and urban areas, the largest city in the first study was Piqua, Ohio (population approximately 16,000). No suburban community was included, and the entire sample was from one county, Miami County. The size of the sample was also considerably larger than the present sample.

In contrast, the present study included a suburb (Bexley, Ohio), inner-city section of Columbus, Ohio (over 500,000 population), Appalachian small city (Jackson, Ohio - population 7,000) and upper Wyandot County (largest village - 1,000 population).

Group differences in the two studies were computed using different statistical techniques. In the first study, critical ratios were obtained to determine significance. The present study utilized Pearson r to establish the degree of relationship between the tests of personal and social adjustment. A relatively strong relationship was in existence so the test scores were computed bivariately in a multivariate analysis of variance. The latter technique was considered more appropriate for interpretation.

Three hundred and fifty-five children were involved in the investigation. Five schools were the source of the data collection. The schools and their respective areas with the number of participants were:
1) Chicago Avenue Elementary - Central City
    Columbus, Ohio -- 83 children

2) Sycamore Elementary and McCutchenville
    Elementary - Upper Wyandot County, Ohio --
    94 children

3) Montrose Elementary - Bexley, Ohio -- 82
    children

4) Kinnison Elementary - Jackson, Ohio -- 96
    children

The sixth grade children took the test silently with
a teacher in attendance to insure validity. The third
graders were administered the tests orally as suggested
in the manual.

Notification of the schools' participation was mailed
first class to involved parents. If permission was to be
denied, an enclosed form was to be signed and mailed in a
self-addressed, stamped envelope that was enclosed. Be-
tween five and ten percent denied permission.

Paid interviewers telephoned parents in search of
socio-economic data that would help make clear the status
of the families. This was descriptive data and was not used
in a correlational manner.

The major questions posed by this investigation may be
summarized as follows:

1) Do children living in an area of less than 2,500
   population have a higher personal and social
   adjustment than children living in an area of more
   than 500,000 population?
2) Do children living in an area of less than 2,500 population have a higher personal and social adjustment than children living in an area of 7,000 population?

3) Does the sex of the child make a difference on his/her personal and social adjustment?

4) Does the interaction of sex and area make a difference in the personal and social adjustment of children?

Specific hypotheses were stated for each grade. The findings revealed that there were differences between the areas in the third grade. The rural children did not have a higher personality adjustment than the suburban children. They did have higher social adjustment scores than the inner-city children, but were lower on personal adjustment.

The children at Kinnison School in Jackson scored higher in both personal and social adjustment than the children from rural upper Wyandot County.

Hypotheses 1 and 2 were rejected except in the area of social adjustment with Chicago Avenue Elementary.

The interaction of area and sex did not make a difference on the personal and social adjustment scores. Accordingly, hypothesis 5 was not supported. Hypothesis 7 was not totally confirmed. There was a difference between the sexes on the scores, but the girls superiority as
hypothesized was not consistent. There was variation in the girls' performance on different tests in different grades.

For the sixth grade, there were no significant differences between the areas. Hypothesis 3 was not totally rejected and hypothesis 4 was not supported. Hypothesis 8 was not totally confirmed. There was a difference between the sexes on the scores, but the girls superiority as hypothesized was not consistent. There was variation in the girls' performance on different tests in different grades.

There was no interaction between area and sex. As far as personality adjustment and the interaction of area and sex is concerned, it does not make a difference whether a boy or girl lives in a rural or urban area. Hypothesis 6 was not confirmed.

The findings and conclusions of this investigation may be summarized as follows:

1) Personality adjustment scores of children living in a rural area were generally not higher than scores received by children living in urban-type areas, namely an inner-city, a city-suburb, and a small city. There were two exceptions. The social adjustment scores of the rural area were higher than the social adjustment scores of the
inner-city area in the third grade; in the sixth grade rural personal adjustment scores were higher than inner-city and social adjustment scores were tied with inner city.

2) The four areas differed on their mean scores of personal and social adjustment in the third grade. The obtained significance levels were close to the .05 level adopted for significance. In the opinion of this researcher, the slight difference does not allow for an acceptance of "real" differences between the areas for the third grade.

3) The sixth grade showed no difference of means between the areas.

4) There was a difference between boys' and girls' performance on the tests. The difference in favor of the girls was not consistent for the two grades nor was there consistency on the two tests.

5) There was no effect on the scores from an interaction of sex and area.

Limitations of the Study

This sample cannot be considered representative in all respects. Hence, the conclusions stated in this report may have limited validity for areas other than the ones actually included in the present study. The instrument that was
utilized had a fairly high reliability coefficient, but its validity was not unquestioned by reviewers. As with any psychological test, a contextual interpretation is considered more comprehensive. Factors such as developmental history and family background are important contributors to a child's feelings and attitudes and the mode of behavior in handling frustrations. A criticism of personality inventories of a general type such as the California Test of Personality is the implied uniform and stereotypical way one should deal with problems (Buros, 1940, p. 1214).

It was not the intent of this study to make any judgments of superior and inferior adjustment nor to conduct a correlational study showing the relationship between residence and personality adjustment.

Implications

From the analysis of the findings and the conclusions, it appears that the findings of Mangus' (1948) study are open to questions. The 1948 study is cited frequently in the literature in order to substantiate the argument for the superiority of the rural environment over the urban environment.

According to inferences in past research, if any rural-urban differences in children's personality characteristics were to exist, the differences were expected between rural children and children coming from large urban areas. This
was not the case in this study for the sixth grade. The third grade did show differences; but, in the opinion of this investigator, the significance levels were too close to .05 to warrant a "firm" declaration of differences. The inference based on the empirical data in this study may be that urbanization has converged the differences. This study can have implications for the rural-urban difference issue that still emerges in the literature (van Es & Brown, 1974; Willets, Bealer and Crider, 1973). The findings of this study would not confirm the conclusion made in the Willets et al, 1973 study that the variable "rurality" may still represent a very useful tool for dealing with attitudinal and possibly other differences as in the past.

A long-held belief in the social sciences has been that socio-economic status usually accounts for most of the variation found in rural and urban groups. This belief has been substantiated in research.

Although socio-economic variables were not correlated and controlled with the dependent variables in this study, still there was information collected that would shape expectations.

First, in the primary grade, differences were found but the differences did not consistently favor the suburb with the higher level of living. In the sixth grade, the suburb did score higher, but the test of significance was
These results may have implications for school personnel and community development programs. According to the results of this study, assumptions held by school personnel that suburban children are in a more favorable position than inner-city children in regard to personality adjustment have to be challenged. The children in the higher socio-economic area school expressed similar needs as those children in the lower socio-economic bracket.

For community development programs where suburbanization is a goal, these findings do not substantiate the premise that city life is not as wholesome in terms of personality adjustment as defined in this study.

These findings of the present study are limited as far as generalizations are concerned. But they can act as a vehicle of action to conduct further detailed research in the related areas.

**Suggestions for Further Research**

There were differences between the groups in this investigation. But, they were so minimal, no further analysis was pursued. A larger sample from a greater variety of areas may have increased the differences.

The following suggestions may be helpful in broadening the base of knowledge about rural-urban differences:
1) Replication of this study with a more representative sample and the inclusion of more grades. In this way, generalizations could be made to a larger target audience.

2) Introduction of more relevant variables than the commonly used one of family income, parents' occupation, parents' education and mobility. Variables related to family background, expectations, family rules, developmental history, etc., could provide useful insights into behavioral patterns and could account for observed differences. With such variables, correlational research would be the recommended methodology.
PARENTAL PERMISSION REQUEST

Chicago School has been selected to be a part of a study that is about personality differences of rural and urban children.

The study will be conducted by Elaine Karr, graduate student, O.S.U., with the permission of Mr. Joe Green, Principal.

The California Test of Personality (successfully used in over 400 studies) will be used. A sample question is: "Do you talk to new children at school?"

1. There will be no names on the tests.
2. Simple yes & no answers are required
3. Confidentiality is assured.
4. Only 40-50 minutes is required.
5. The test will be given during free periods at school.
6. The test will be given sometime in April.

If you do not want your child in the study, sign below and return in the self-addressed stamped envelope.

If you do want your child in the study you may ask that he or she be taken out at any time.

If this is not returned, it will be assumed that your child has permission.

I thank you for your cooperation.
My telephone number is 614-422-8571.

☐ I do not want my child to be in the study.
☐ I want my child removed from the study.

Signed: ____________________________
Hello, I am ______________________________(Name)

I am helping with the study at school. In order for it to be a good study and be helpful to the school we would like you to answer a few questions.

Your name will not be used with the answers and no one will know what you have said.

Now, can you tell me........

1. How many years of school were completed by
   a. Father ______
   b. Mother ______
   c. Other (Guardian, Grandparent, whoever is responsible for child) ______

2. What type of work does the person do who supports the family?
   a. Father ______
   b. Mother ______
   c. Other (person who is responsible for taking care of the child) ______

3. How long have you lived in this school district? ______

4. Is your family income
   a. Less than $5,000 ______
   b. Between $5,000 and $10,000 ______
   c. Between $10,000 and $15,000 ______
   d. Over $15,000 ______
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Theses


Related Books and Journal Articles


