

To the Graduate Council:

I am submitting herewith a dissertation written by Gregory J. Meissen entitled "A Differential Analysis of the Perceived Social Impacts of a World's Exposition." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Psychology.

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A DIFFERENTIAL ANALYSIS OF THE PERCEIVED SOCIAL
IMPACTS OF A WORLD'S EXPOSITION

A Dissertation
Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville

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DEDICATED TO

My wife, Jan Burbach-Meissen

My father, Joseph F. Meissen

My aunt, Marcella K. Deringer

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ABSTRACT

The primary purpose of this study was to assess and compare the perceived differential social impacts of the 1982 International Energy Exposition (EXPO 82) on different subgroups of community residents. A model was developed for this research that drew from Melvin Seeman's alienation theory, the perspective of community psychology, as well as past social impact research. This model was also used to examine attitudes toward EXPO 82 and political activity related to EXPO 82. A secondary purpose of the study was to obtain a baseline of community residents' beliefs about potential social impacts, and attitudes toward EXPO 82, in order to allow assessment of changes in these subjective dimensions that could accompany the ongoing construction and operation of EXPO 82.

Beliefs about the likelihood and desirability of potential social impacts resulting from EXPO 82, political efficacy, attitudes toward EXPO 82, level of knowledge of EXPO 82 specifics and reported EXPO political activity were measured by interviewing a random sample of 335 community residents. Subgroups of respondents were developed and their beliefs about potential positive and negative social impacts were compared using one-way analysis procedures. A path analysis was also performed to examine the effects of SES and alienation on beliefs about potential social impacts, attitudes toward EXPO 82 and political activity related to EXPO 82.

Both the high general political efficacy and the high EXPO political efficacy groups anticipated a greater likelihood of positive impacts and a lesser likelihood of negative impacts, when compared to the low political efficacy respondents. Respondents in the low socioeconomic group expected a lesser likelihood of positive impacts, when compared to the high socioeconomic group, but both groups anticipated a similar level of negative impacts. Respondents were broken into high and low level groups on knowledge of EXPO and EXPO political activity, but no significant differences were found between these high and low groups on their beliefs about potential positive or negative social impacts. The same result was found when the sample was divided into elderly versus non-elderly, and home owners versus renters. Respondents who reported a high quality of life anticipated a greater likelihood of positive impacts, when compared to the low quality of life group, but beliefs about negative impacts were similar. However, the relationship between the perceived likelihood of social impacts and attitudes toward EXPO 82 was stronger for respondents in the high quality of life and high knowledge of EXPO groups, when compared to the low groups, respectively.

The results of the path analysis showed that EXPO political efficacy, importance of information sources, race and attitudes toward EXPO 82 were all related to the perceived likelihood of potential social impacts resulting from EXPO 82. Attitudes toward EXPO 82 were also found to be influenced by the respondents' perceived EXPO political efficacy, race, and beliefs about potential impacts. The path analysis also showed EXPO political activity as being dependent on respondents' knowledge of EXPO,

their level of education, as well as their attitudes and perceived political efficacy in regard to EXPO 82.

The results indicated the usefulness of alienation theory and the perspective of community psychology for the study of differential social impacts. Results were also discussed in reference to the literature on differential social impacts. Finally, the relevance of the proposed model for future differential analysis of social impacts was discussed.

TABLE OF CONTENTS

CHAPTER	PAGE
I. INTRODUCTION	1
Social Impact Assessment	3
History of social impact assessment	5
Review of social impact research	7
Industrial development	8
Water projects	9
Transportation construction	11
Mining	13
Nuclear power plants	16
Problems of social impact assessment	19
Theory	21
SIA: politics or science?	22
Level of analysis	26
Cost-benefit analysis	26
Differential impacts	27
A Community Psychology's Perspective on	
Social Impact Assessment	30
Politics or science?	33
Level of analysis	34
Subjective versus objective data	35
Beliefs	36
A Theoretical Orientation to Differential Impacts	37
Alienation Theory	39
Historical perspective	39
Seeman's alienation theory	41
Powerlessness	42
Meaninglessness	44
EXPO 82	46
Rationale and Purpose of the Study	47
Hypothesized model of the effects of alienation	
on perceived social impacts, attitudes, and	
political activity related to EXPO 82	49
Specific hypotheses	58
II. METHODS	63
Interviews	63
Interview method	63
Participants	63
Interviewers	63
Sampling procedures	64
Interviewing procedure	65

CHAPTER	PAGE
Survey instrument	66
Demographic information	66
Political efficacy	67
Political activity	67
Knowledge of EXPO 82	67
Quality of life	67
Likelihood of impacts due to EXPO 82	68
Importance of information sources	69
III. RESULTS	70
Opinions About EXPO 82	70
Analysis of Differential Impacts	74
Hypothesis 1a; political efficacy	79
Hypothesis 1b; EXPO political activity	84
Hypothesis 2a; knowledge of EXPO	87
Hypothesis 2b; knowledge as a moderator variable	92
Hypothesis 3a; socioeconomic status	93
Hypothesis 3b; residence owned versus rented	96
Hypothesis 4; elderly	96
Hypothesis 5a; quality of life	96
Hypothesis 5b; quality of life as moderator variable	104
Path analysis model of the effects of alienation on perceived social impacts, attitudes, and political activity related to EXPO 82	105
Interrelationship between SES and alienation variables	107
Direct and total effects of SES and alienation variables on positive minus negative perceived impacts, attitudes, and political activity related to EXPO	113
Additive effects of SES and the alienation variables	120
Final path model	124
IV. DISCUSSION	132
Final Path Model	132
Perceived likelihood of positive minus negative social impacts	132
Attitudes toward EXPO	144
EXPO political activity	146
V. CONCLUSION	150
REFERENCES	155

APPENDIXES	167
Appendix A	168
Appendix B	170
Appendix C	172
VITA	179

LIST OF TABLES

TABLE	PAGE
1. Opinions Concerning EXPO 82	72
2. Opinions Concerning Proposed EXPO 82 Referendums	73
3. Likelihood of Potential Social Impacts	75
4. Desirability of Potential Social Impacts	78
5. Summary of Analysis of Variance of the Perceived Likelihood of Positive Social Impacts of High Versus Low Political Efficacy Groups	80
6. Means and Standard Deviations of the Perceived Likelihood of Positive and Negative Social Impacts	82
7. Summary of Analysis of Variance of the Perceived Likelihood of Negative Social Impacts of High Versus Low EXPO Political Efficacy Groups	83
8. Summary of Analysis of Variance of the Perceived Likelihood of Positive Social Impacts of High Versus Low General Political Efficacy Groups	85
9. Summary of Analysis of Variance of the Perceived Likelihood of Negative Social Impacts of High Versus Low General Political Efficacy Groups	86
10. Summary of Analysis of Variance of the Perceived Likelihood of Positive Social Impacts of High Versus Low EXPO Political Activity Groups	88
11. Summary of Analysis of Variance of the Perceived Likelihood of Negative Social Impacts of High Versus Low EXPO Political Activity Groups	89
12. Summary of Analysis of Variance of the Perceived Likelihood of Positive Social Impacts of High Versus Low Knowledge of EXPO Groups	90
13. Summary of Analysis of Variance of the Perceived Likelihood of Negative Social Impacts of High Versus Low Knowledge of EXPO Groups	91

TABLE

PAGE

14.	Summary of Analysis of Variance of the Perceived Likelihood of Positive Social Impacts of High Versus Low SES Groups	94
15.	Summary of Analysis of Variance of the Perceived Likelihood of Negative Social Impacts of High Versus Low SES Groups	95
16.	Summary of Analysis of Variance of the Perceived Likelihood of Positive Social Impacts of Owners Versus Renters	97
17.	Summary of Analysis of Variance of the Perceived Likelihood of Negative Social Impacts of Owners Versus Renters	98
18.	Summary of Analysis of Variance of the Perceived Likelihood of Positive Social Impacts of Elderly Versus Nonelderly	99
19.	Summary of Analysis of Variance of the Perceived Likelihood of Negative Social Impacts of Elderly Versus Nonelderly	100
20.	Summary of Analysis of Variance of the Perceived Likelihood of Positive Social Impacts of High Versus Low Quality of Life Groups	102
21.	Summary of Analysis of Variance of the Perceived Likelihood of Negative Social Impacts of High Versus Low Quality of Life Groups	103
22.	Correlation Matrix of All Variables in the Hypothesized Model	109
23.	Summary of Direct and Total Effects of SES, General and Specific Alienation on the Perceived Social Impacts, Attitudes and Political Activity Related to EXPO for the Hypothesized Model	114
24.	Amount of Variance Accounted for (R^2) with the Addition of Each Independent Variable	121
25.	Summary of Results of Stepwise Multiple Regression Analysis for the Perceived Likelihood of Positive Minus Negative Social Impacts of EXPO	125
26.	Summary of Results of Stepwise Multiple Regression Analysis for Attitudes Toward EXPO	126

TABLE

PAGE

27.	Summary of Results of Stepwise Multiple Regression Analysis for EXPO Political Activity	127
28.	Summary of Results of Stepwise Multiple Regression Analysis for the Perceived Likelihood of Positive Minus Negative Social Impacts of EXPO with Significant Variables	128
29.	Summary of Results of Stepwise Multiple Regression Analysis for Attitudes Toward EXPO with Significant Variables	129
30.	Summary of Results of Stepwise Multiple Regression Analysis for EXPO Political Activity with Significant Variables	130

CHAPTER I

INTRODUCTION

Rarely in modern times has it been more important that society effectively and rationally manage both environmental and human resources. The need for social decisions and actions to be influenced by experimental social research aimed at improving the quality of human functions will be increasingly important in the 1980's (Fairweather, 1972). Social impact assessment (SIA), a multidisciplinary area of social science knowledge and application concerned with estimating, appraising, and mitigating the social effects of large-scale planned change, can be important to this decision-making process.

The findings of a social impact study can give decision-makers more information concerning the planned and unplanned social consequences of a policy, program, or project. This information would allow for more rational decision-making and be the basis for coping with the resultant change. Too often this type of input is unavailable or not obtained. "Here is an area where what social scientists think and argue convincingly can make a substantial difference to the quality of human life and the condition of human community" (Wolf, 1975, p. 261).

It appears that both the positive and negative social impacts of large-scale projects are not felt uniformly across different strata of society. Differential social impacts are a neglected area of research, even though they are often stressed in the writings of SIA (Peele, 1974; Schnaiberg, 1975). Differential impacts can be defined as

impacts that affect different people in different ways. Some individuals and groups gain a great deal from a project and others lose a great deal while many are unaffected (Shields, 1975). One promising approach to the study of differential impacts is to assess the positive and negative impacts of a project at the individual and group level versus the more typical regional/community approach of cost-benefit analysis.

The purpose of the present study was to assess and compare the perceived differential social impacts of the 1982 International Energy Exposition (EXPO 82) on different subgroups of local residents. The theoretical basis for comparing these groups draws on the alienation theory of Melvin Seeman (1959, 1972a), the theoretical perspective of community psychology (Rappaport, 1977), and past social impact research. In order to separate participants into meaningful subgroups, techniques used in past research findings on alienation owing to powerlessness and meaninglessness were primarily applied (Seeman, 1972a). More specifically, participants were divided into groups according to: high versus low perceived political efficacy; (b) high versus low political activity; (c) high versus low knowledge about EXPO 82; (d) high versus low socioeconomic status (SES); (e) high versus low perceived quality of life; (f) the owning or renting of their homes; and (g) elderly (over 60) versus participants less than 60 years of age. The perceived likelihood or expected outcomes of the social impacts of EXPO 82 were then compared across these contrasting groups.

The following section discusses the field of SIA and includes a brief view of its history and a review of the literature pertinent to

the present study. This is followed by a presentation of some of the problems of SIA. A discussion of a community psychology perspective of SIA attempts to deal with some of these common problems and leads to a discussion of alienation theory. Finally, the specific hypotheses of the study are presented.

Social Impact Assessment

Social impact assessment is the task of estimating and appraising the potential social changes or effects of planned change on the surrounding community. In other words, to predict and evaluate a priori, the social impacts of a policy, program, or project (Wolf, 1975).

The Office of the Corps of Engineers (1972) offers a definition of impact assessment in general that is commonly used:

Effect assessment is an interactive process which consists of the following steps: identification of anticipated project-caused economic, social, and environmental effects; quantitative and qualitative description and display of the effects; evaluation of the effects, whether adverse or beneficial; and consideration of measures to be taken if a proposed project would cause adverse effects. (p. 3)

"Social effects" have further been defined by the Office of the Corps of Engineers (1973), in reference specifically to SIA, as observable quantitative or qualitative changes in social phenomena relating to any proposed project. Llewellyn (1974) defined social impacts as "changes in interpersonal relationships, perceived well-being, or quality of life which might be attributed directly or indirectly to the project" (p. 90). These social effects can either have a positive or a negative impact or, in some cases, can have a positive impact on one part of the population

while having an adverse impact on other groups. Specific social impacts can be great in number and variety, and differ across both projects and communities. One of the difficulties of SIA is determining the most important social variables in relation to a specific project and/or community. "Grocery lists" of potential social impacts across a large variety of projects and sites have been developed as an aid in impact studies (e.g., Fitzsimmons, Stuart, & Wolff, 1975, p. 159). In the simplest and most general terms, a social impact is anything which effects a change in the state of a social system or its subsystems.

Levels of SIA were described by Wolf (1974b) as: (a) profiling, (b) projecting, (c) assessment, and (d) evaluation. Profiling is the process of describing the conditions of an impact situation prior to any of the effects of the planned intervention. This procedure provides a baseline from which change can be measured. Projecting can be defined as predicting future impact states, usually with the project, and without the project. Assessment can be simply defined as the measurement of change from profiling to a futuristic point in the project. Evaluation is the decision-making process—weighing the positive versus the negative impacts in the decision to implement or not implement the project.

The specific purpose of SIA is to assess whether or not to implement the proposed project based on social issues (McCoy, 1975) and, if implementation is approved, to assist in developing a mitigation plan to minimize the impacts of the project (Peele, 1974). "Above all, what SIA symbolizes is the assumption of social responsibility on the part of public authorities and its imposition on private interests. What is

being requested—indeed demanded—is nothing less than the use of social forecasts as a planning base" (Wolf, 1974b, p. 4). Wolf further stresses the importance of citizen participation in the SIA process along with the "public authorities" and "private interests."

History of Social Impact Assessment

The early roots of study concerning the social consequences of societal and technological change have been traced by Wolf (1976a) to the early work of Ogburn (1922) when he discussed the cultural lag hypothesis: "Wherein changes in material culture are said to induce alternatives in the nonmaterial adaptive culture" (Wolf, 1974b, p. 57). An early, classic account of technological change creating social change appeared in Cottrell's (1951) Death by Dieselization. Cottrell discussed how the town of Calient died along with the steam engine. Society advanced incredibly by the use of the diesel engine but Cottrell felt it important to point out some of the adverse social costs of this advancement.

More recent interest in SIA specifically began in the early sixties through a combination of private interest groups, academic pursuits, and federal legislation that were connected with the environmental movement. During that time there was a growing concern over the depletion and exploitation of natural resources and the general deterioration of the environment. The creation of the Natural Resources Research Committee was one of the first organized attempts to "bring together persons, regardless of their academic and occupational position, that had an interest in the social science implications of Federal and

State concerns with natural resource development" (Burdge, 1977, p. 3). At about the same time, Congress passed the Land and Water Conservation Act of 1964 making research money more available to social scientists interested in the impacts of natural resource development. Concern and interest about environmental problems, natural resource exploitation, and impacts of large federal and private projects continued to grow through the sixties. The passage of Public Law 91-90, the National Environmental Policy Act (NEPA) of 1969, was a response in part to these concerns at the federal level. NEPA mandated public environmental impact statements (EIS's) to assess the primary and secondary effects of all federal activities affecting the quality of the human environment (Wolf, 1974). The federal government anticipated EIS's that (a) were scientific and multidisciplinary, (b) took into account all relevant factors, (c) evaluated the unquantifiable, (d) produced policy which mitigates all damage, and (e) were coordinated with the policy of all other relevant governmental entities" (Friesema & Culhane, 1976, p. 339). The implied intent of NEPA was to supply scientific information to federal agencies, private organizations, and the public in order that rational decisions on large-scale projects could be made in regard to the impacts of the project.

In the early seventies, social concerns began to receive a greater emphasis in the EIS process. Traditionally, a short section on social impacts had been included in EIS's, but more recently social impacts have received more attention, and independent social impact studies have begun to appear. This greater interest in social impacts was precipitated

first by the global concerns and language of NEPA (e.g., quality of human environment, primary and secondary effects, all relevant factors). At the same time, the number of social scientists who were interested in impact assessment began to increase. Many social scientists were initially attracted to SIA by environmental concerns, but after becoming familiar with intent of NEPA, they began to press for impact assessment at the social, cultural, and psychological level. Finally, sociocultural issues involving native Americans began to draw the interest of sociologists and anthropologists, setting a precedence for the study of human impacts as part of the EIS process (e.g., U.S. Department of the Interior, 1974a, 1974b).

Concomitantly, an interdisciplinary group of social scientists, The Social Impact Assessment Network, interested specifically in the social effects of large-scale planned change, was formed in 1974 by C. P. Wolf (Wolf, 1976b). Even though SIA has become a more important part of the EIS process and has grown as an independent discipline, most experts agree that the application of SIA is beset by a number of problems (e.g., Wolf, 1974b; Lewis, 1980; Schnaiberg & Meidinger, 1978; Friesema & Culhane, 1974; Burdge, 1977).

Review of Social Impact Research

A review of the literature of SIA revealed a number of major areas in which social impact research has taken place (e.g., highway construction, nuclear power plants, mines, new towns). Special emphasis was given to research on the differential impacts of large-scale projects on subgroups of the population and across different socioeconomic strata of

society. The few studies incorporating the notion of alienation were also examined, as well as a concentration of research using subjective data. Before reviewing specific studies in these areas, the "social impact sections" of EIS's must be briefly discussed. Friesema and Culhane (1976) have collected a large number of EIS's, including nearly complete collections for the Forest Service, Corps of Engineers, National Park Service, Atomic Energy Commission, Tennessee Valley Authority (TVA), and the United States Environmental Protection Agency. In an evaluation of social impact analysis in EIS's, they conclude that "the social consequences actually considered and discussed in EIS's are limited" (Friesema & Culhane, 1976, p. 342). When social impacts were considered, assessments were often based on what appeared to be the "best guesses" of the authors, entailing no empirical or theoretical research whatsoever. Some recent EIS's have shown improvement both in the recognition of social impacts and the methodology employed, but a great majority of more rigorous social impact research has come from studies independent of EIS's (Lewis, 1980; Wolf, 1976a).

Industrial development. A large body of literature exists on the effects of industrial development on surrounding communities. Though a majority of these studies were not labeled social impact research as such, many are still relevant to SIA. Breese, Klingenstein, Cahill, Whelan, Church, and Whiteman (1965) reviewed a number of studies on the impact of large military and industrial installations on nearby areas. They discovered a number of similarities across studies important to SIA including: (a) nearby areas had little experience dealing with

large-scale, rapid change; (b) the rate of impact was rapid; (c) the host areas were poorly staffed and financed to handle the rapid change; (d) the host areas changed from a rural or semi-urban "type of living" to a more urban "type of living" (some were considered urban prior to the impacts); (e) a great number of new workers entered the area during the construction phase (usually temporary); (f) impacts appeared to disproportionately affect poorer individuals (primarily increased rent of those not owning homes and lack of positive economic/business impacts); and (g) employment, housing, and most other "living patterns" fluctuated a great deal. Clemente's (1975) study of 178 different instances of industrial developments and their impact on communities found many of the same results as Breese et al. (1965). Changes in population size, migration patterns, average income and distribution, and community satisfaction were emphasized. He found that the average "community satisfaction" did not decrease as much as predicted but that subgroups, especially the elderly, were impacted upon more severely and experienced more dissatisfaction with the development (Clemente & Summers, 1973). Harvey (1975) has further summarized the social and economic impacts of industrial development with special emphasis to nonmetropolitan areas and the literature of rural sociology, but did not emphasize differential impacts.

Water projects. The impacts of government water projects (e.g., dams, flood plains, watershed, navigation development) have received a good deal of attention, especially since the passage of NEPA. In an exhaustive review of the field of SIA as it relates to water projects,

Fitzsimmons and Salama (1973) concluded that until recently there had been a lack of concern about the impact of water policy on humans. They stated there was little good theoretical or empirical work concerning the topic, especially concerning the relationship between humans and water policy at the program level. Fitzsimmons and Salama (1973) offer few new ideas to the measurement of impacts but do provide an excellent review and critique of the past literature on water resource impacts.

Smith and Hogg (1971) and Smith, Hogg, and Reagan (1971) have examined the impact of water resources development on communities. They investigated local attitudes toward development, educational and municipal services, and taxation before, during, and after reservoir construction. The findings varied greatly as a function of the stage of development of the project. Public facilities which were expanded or improved during the construction phase later became a financial burden to local residents, and the prolonged growth which was anticipated never materialized. The authors considered the somewhat inaccurate and inflated expectations of positive impacts prior to construction to affect the lower levels of satisfaction with the project after completion.

Singh and Wilkinson (1974) employed attitudinal measures to ascertain residents' perceptions of impacts from a planned watershed development project. Over 300 individuals were interviewed about their knowledge of the project, their vested interest in it, and social and environmental impacts they thought might occur.

Using a variety of data obtained in previous studies of psychological, social, and economic costs and benefits, Burdge and

Johnson (1973) wrote a comprehensive report concerning relocation due to Corps of Engineers' water projects. The research took a longitudinal approach following the forced relocation process from premigration to postrelocation. In a differential analysis, the younger, more affluent, and better educated persons fared better in the relocation process than did the older, poorer, and less educated (Burdge & Johnson, 1973). Negative attitudes toward the water project and the Corps of Engineers centered around the feeling of losing something personally, perceived mistreatment by the Corps, and difficulty in relocating.

In a similar series of studies, Napier (1972), and Napier and Moody (1979) investigated alienation and the effects of forced migration due to water projects. Napier (1972) hypothesized that relocated groups and individuals would become more alienated from the changing community than those not forced to move. What they found was that these groups and individuals exhibited no more alienation from the community but were shown to be more alienated from the agency responsible for the forced move. One reason given for the absence of alienation toward the community was that most individuals remained in the community but in a new residence.

The effects of forced relocation have been examined in numerous other works. A brief review of this literature may be found in Llewellyn (1974). A more comprehensive bibliography on the topic has been compiled by Donnermeyer (1975).

Transportation construction. The study of the effects of highway construction has been the busiest area of the field of impact assessment

with over half of all EIS's being prepared by the Federal Highway Administration (Friesema & Culhane, 1974). Unfortunately, a majority of the social impact studies of highway construction end in the final EIS. The amount of academic and independent social impact research in this area is not proportional to its widespread significance. The work of Llewellyn (1974, 1977) and her associates (Llewellyn, Bunten, Goodman, Hare, Mach, & Swisher, 1975; Llewellyn, Goodman, & Hare, 1976) is the most complete of what is available. Llewellyn (1974) reviewed several studies dealing with the social impacts of urban highway construction. She examined studies on social impacts derived primarily from surveys with individuals living in proximity to proposed or completed urban freeways. She presents data on perceived highway impacts with special emphasis on relocation, noise, and differential impacts. Her findings suggest that the social costs of freeways are generally borne by the urban poor, minorities, and aged.

Llewellyn noted that the general public mostly favors highway construction. But recently there has been opposition to some urban freeway construction by groups who perceive substantial negative impacts associated with the highway (Amir, 1972; Fellman & Brandt, 1970, 1971). In an effort to improve research on the social impacts of highways, especially in the areas of citizen input and differential impacts, Llewellyn (1977) produced guidelines for highway planners (Llewellyn et al., 1975; Llewellyn et al., 1976) and conducted a needs assessment survey of highway planners (Llewellyn, 1977).

Mining. The impacts of the mining industry have been extensive and long recognized as producing differential impacts across society (Mumford, 1963; Caudill, 1976), but research on the social impacts of mining is limited. Krebs (1975) described the social effects of underground and surface mining in Appalachia by comparing matched communities differing in the presence or absence of coal mining operations. Archival data and aerial photographs were examined for the period of 1925 to 1975 for both a diachronic comparison of the impacted community as well as the synchronic comparison of the matched communities. Using a general systems approach, Krebs explored the different impacts of underground and strip mining in reference to changing patterns of land use. Strip mining uses considerably less human labor and consumes considerably more agricultural land than underground mining. Krebs discussed the impacts of migration to industrial cities of the poor rural farmers and unemployed miners caused by strip mining, and the resultant "metropolitan" problems caused by this exodus. Krebs' analysis is particularly insightful because he followed these differential social impacts past the host community to other levels often ignored in SIA. He also warned (in 1975) that coal mining would become an even larger "social issue" because of an anticipated shift to coal with the worsening oil crisis. Lewis (1980), in a recent article on Appalachian coal mining, social impacts and a worsening energy crisis, expressed concern over the lack of treatment of social impacts in general. She further expressed apprehension over the recent relaxation of environmental regulations over economic and energy concerns (e.g., relaxing of NEPA standards to allow

completion of the Tellico Dam). The implication is that energy-related social impacts will be given even less consideration. Gold (1974, 1977) has also dealt with the social-psychological impacts of mining but from a very different orientation than Krebs (1975). Gold used an ethnographic methodology that yields authenticity to his findings, but also produced results with limited generalizability primarily due to sampling inadequacies (Kelly, 1974). But Gold's research is valuable in the sense that he attempted to relate his findings to a theoretical framework (a grounded theory approach and anomie), and he was concerned with the subjective, individual level of analysis, both often overlooked in SIA. Gold discovered that a majority of the problems were a function of the large and rapid increase in population of the rural communities studied. This "boom town" phenomena has long been associated with mining towns, and Gold's analysis, though subjective, is enlightening.

A majority of the literature concerning boom towns has come from the study of mining communities. Davenport and Davenport (1979, p. 21) in an edited volume Boom Towns and Human Services, identified a boom town as "a community experiencing above average economic and population growth, which results in benefits for the community (e.g., expanded tax base, increased employment opportunities, social and cultural diversity) but which also places or results in strain on existing community and societal institutions (e.g., familial, education, political, economics)." Corteze and Jones (1979) differentiated the modern boom towns from other communities that experienced rapid growth and urbanization (e.g., due to the Industrial Revolution). Their most salient distinction was that a

"bust" is usually built into the boom. A "bust" usually occurs because large numbers of construction workers enter the community but leave after construction, and/or construction did not precipitate replacements to maintain the level of growth, consequently a decline, primarily in the local economy occurs. Typically, local institutions (e.g., schools, police, local governments) which have expanded to facilitate this growth are too large and expensive to maintain. The overriding conclusion concerning differential impacts of boom towns is that business leaders and other key individuals benefit from the economic boom while many others suffer the disruptions. Those who experience the negative impacts are people on fixed incomes, those unable to work in the new industry or construction work force (e.g., women, Blacks, elderly, disabled), and people who do not own their own homes and are forced to pay inflated rent prices (Davenport & Davenport, 1979; Gilmore & Duff, 1975). A number of studies have recently examined the social impacts of energy-related boom towns that have begun to spring up due to the energy crisis (e.g., Davenport & Davenport, 1979; Gilmore & Duff, 1975; Gilmore, 1976; Little, 1977; Meissen, Seibel, & Bronfman, 1980). The rapid population growth and urbanization discussed by Breese et al. (1968) and the re-surfacing of boom towns indicate the seriousness of these problems to SIA and differential analysis.

An interesting comparison to the uncontrolled growth experienced by a boom town is John Kelly's (1975) work on the impact of a new town on the surrounding county. The primary differences between new towns and boom towns were new towns had the benefit of extensive planning prior to

construction. When the construction crews left, new residents moved in to operate the new industries and businesses that have been planned. The other major difference was that a new town did not impact on an already established town. The problems Gold (1974) described between old and new residents in a mining boom town were not relevant because there are no old residents. Kelly described conflicts between the new town residents and other residents of the county, but they were in no way as serious as those described by Gold. Kelly focused on institutional and social considerations comparing planned impacts to actual outcomes. If one compared these outcomes, though many anticipated, with the impacts of boom towns, the positive impacts of new towns were more evenly distributed (e.g., leisure facilities, community services). The negative impacts described were paltry compared to those in boom towns, and did not seem to overwhelmingly center on certain subgroups.

Nuclear power plants. One of the newest but most important areas for the study of social impacts is the building and operating of nuclear power plants. The construction phase brings about a "boom" in the surrounding area due to the large number of uniquely skilled workers who are imported. In this respect the building of a nuclear power plant is similar to most large-scale projects, but the operation of the plant presents some unique problems that other projects (e.g., dams, highways, coal-burning plants) do not have; potential nuclear radiation hazards.

One productive group in this area is the Social Impact Assessment Group at Oak Ridge National Laboratory. Peele (1974) discussed the differential impacts of the Mendocina power plant. She explained that at

the most global level the primary beneficiaries of the plant were the consumers in San Francisco, but that they would not pay any of the social costs during the construction or operation period. This discrepancy existed at the local level as well. Peele (1974, p. 119) suggested, specifically in reference to the study of differential impacts in SIA, to separate residents into subgroups in order to examine potential beneficial and adverse impacts across these groups and develop "an analysis of options available for reducing or mitigating adverse social impacts of proposed actions."

More recently, a number of studies have been published in conjunction with the Oak Ridge Impact Group concerning the social impacts around the construction of the Hartsville Nuclear Power Plant. The approach the group has taken is a longitudinal one centering on the collection of subjective data through structured interviews using the sampling techniques of survey research (Schuller, Fowler, Mattingly, Sundstrom, Lounsbury, Passino, Dowell, & Hutton, 1975). A random sample of county residents was interviewed prior to construction (Schuller et al., 1975) and during the initial stages of work (Sundstrom, Costomiris, DeVault, Dowell, Lounsbury, Mattingly, Passino, & Peele, 1977). Community leaders have also been included in structured interviews during the initial stages of construction (Bronfman, 1977) and during peak construction (Meissen et al., 1980). One purpose of the initial stages of this longitudinal research was to assess the social impacts by collecting residents' subjective responses concerning such dimensions as the perceived likelihood and desirability of both positive and negative

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impacts that could occur due to construction and operation of the plant, and factual knowledge concerning the plant (Lounsbury, Sundstrom, Schuller, Mattingly, & DeVault, 1977). The collection of these data along with other subjective information (e.g., life, neighborhood and community satisfaction, attitudes toward the plant) as well as objective data (e.g., demographics, archival information, census figures) would also provide a baseline to monitor change over time. Sundstrom, Lounsbury, Schuller, Fowler, and Mattingly (1977) found that the perceived likelihood or "expected outcomes" of the social impacts of the plant accounted for nearly half of the variance in predicting citizen attitudes toward the plant. In a related study Lounsbury, Sundstrom, and DeVault (1979) argued that citizen knowledge about the proposed nuclear power plant functioned as a moderator variable to influence their attitudes toward the plant as a function of the expected outcomes of impacts. In other words, they found that the correlation between attitudes and expected outcomes changed as a function of the classification on level of knowledge. Level of knowledge was the moderator variable. In another study that concentrated on the use of subjective data of the social-psychological level, Lounsbury, Sundstrom, and Shields (1979) found no relationship between perceived quality of life and attitudes toward the nuclear plant. But they did find that avowed life satisfaction had a moderating effect on the perceived likelihood of increased business and outside recognition of the town due to the plant.

The research articles reviewed primarily dealt with either the differential impacts of a project, the use of alienation or a related theory, and/or a methodology using subjective data, survey research

techniques or concentrating on social-psychological variables. A comprehensive account of the different methodologies of SIA can be found in Vlachos, Buckley, Filstead, Jacobs, Maruyama, Peterson, and Welleke (1975), Wolf (1974a), and Finsterbusch and Wolf (1977). Shields (1977) discussed in detail the problems of theory and SIA concluding with some suggestions on relevant theoretical approaches to the field. Shields (1975) outlined the levels of impact that a researcher can focus (e.g., institutional, economic, community) and some of the particular variables of concern at these levels. Fitzsimmons et al. (1977) provided an exhaustive list of variables or potential impacts relevant to the study of SIA.

Problems of Social Impact Assessment

Social Impact Assessment is a young discipline, and by its nature, compelled to do research primarily on applied problems. Because SIA is a relatively new area, SIA researchers are still developing methods appropriate to their particular needs. Also, a great deal of discussion in the field continues concerning what methods are best in specific situations. Recently, Finsterbusch and Wolf (1977) have published an edited volume on the methods of social impact research that is evidence of some progress. Addressing applied problems has always caused difficulties in the social sciences. A majority of the difficulties of field studies and experiments discussed by Runkel and McGrath (1972) are pertinent to SIA (e.g., disruption of natural behavior, lack of environmental control, problems of internal validity). Consequently, many of the problems the field has encountered can be traced to its youth and

focus on applied problems. Also, SIA is characterized by an interdisciplinary orientation which has advantages and disadvantages (Rossini & Porter, 1979). One of the biggest problems of the interdisciplinary nature of the field is the scattering of literature across many disciplines (e.g., sociology, psychology, economics, political science, agriculture, nuclear technology, water resources, planning). Further, research studies done primarily by individuals in one specific area often do not acknowledge work done in other areas. Consequently, literature is often restricted to one discipline or type of project, making it more difficult for what Kuhn (1970) termed model or paradigm building.

Social impact studies are concerned with large-scale projects with many far reaching and hard to identify impacts. The prediction and assessment of these types of impacts prior to the beginning of the project appears, at first, to be an insurmountable task. Even before researchers can attempt to apply the proper methods to measure social impacts, they must have an idea of what to measure. Duhl (1967) has discussed this problem at length in his article, "Planning and predicting: Or what to do when you don't know the names of the variables." He suggested literature review, pilot work, reading local newspapers, and extensive interviewing of experts, leaders, and citizens. Another source of information concerning relevant variables for a specific social impact study are initial drafts of EISs. Since the EIS is mandated by law, it is often available to the researcher. An excellent source for relevant variables is Fitzsimmons, Stuart, and Wolff's (1977) list of potential positive and negative social impacts. Mack (1974) has also developed a "grocery list"

of impacts. The development of these "grocery lists" specific to SIA has helped solve the problem of knowing the names of important variables.

When reviewing these general problems, as well as the more specific difficulties of SIA discussed below, it is important to remember that social impact studies traditionally have been part of the EIS process. The EIS concentrated almost exclusively on environmental and economic impacts almost to the exclusion of impacts on the "human side" of the community (Lewis, 1980). "What social impact assessment has meant thus far in practice is no more, and frequently much less, than pro forma compliance with statutory requirements" (Wolf, 1974b, p. 9). Owing to the inadequacies of the social part of environmental impact studies, there has been a movement toward conducting social impact assessments independent of these traditional statements. Though the depth and breadth of the independent social impact studies are much greater than the social parts of typical EIS's, the criticisms discussed below are relevant to both approaches.

Theory. The literature of SIA shows a large and growing interest in empirical studies and methods of assessment (e.g., Wolf, 1974a; Finsterbusch & Wolf, 1977), but little theoretical development can be found in the SIA literature (Shields, 1977). Most often, social impact studies are not well grounded in theory nor are the results linked to any theoretical position (Lovejoy, Baden, & Kremp, 1978). "The field of social impact assessment is characterized better by its practitioners and what they study than by any distinct theoretical perspectives" (Shields, 1977, p. 64).

One reason for the lack of theoretical work is that SIA began more as a "technology" than as a discipline or field. Individuals involved in social impact studies were concerned with obtaining data that would allow them to profile, assess, project, and evaluate the social impacts of a scientific project on a specific community. This site-specific approach resulted in social impact studies that do not tie together well across time or different projects. Friesema and Culhane (1976) comment on the paucity of references, in most social impact studies, to social science research or even to other social impact studies. Consequently, a great number of social impact studies started at the ground floor with no established theoretical underpinnings or even past research to guide the assessment.

It is generally accepted that theory is an important part of the scientific approach to the social sciences (Kuhn, 1970; Ryan, 1973). A more developed theoretical basis for SIA is also likely to provide long-term benefits to the field as well as practical payoffs in the more immediate future. This is especially important when one considers SIA as a specific approach to studying planned social change. Shields (1977) proposed an "eclectic blend" of theoretical ideas closely aligned with the established empirical findings of social impact studies. Even though Shields favored a "grounded theory" approach for SIA, he encouraged researchers to draw from the many relevant social science theories as an aid in doing social impact studies.

SIA: politics or science? The language of NEPA calls for all impact studies to be conducted in a rigorous scientific manner. This would seem to mandate that impact studies be prepared by unbiased, objective researchers. Typically, this is not the case. Often the

federal agency or private company proposing a project is in charge of either conducting the impact study or hiring a firm to manage the impact study. At the very least, the primary suppliers of information concerning the project are these agencies and/or companies involved in the development of the project (Lovejoy, Baden, & Kremp, 1978). It is unrealistic to expect these agencies and corporations to emphasize the negative impacts of a project that would not be beneficial to the continued existence and growth of their organization.

The passage of NEPA was seen by some private groups (e.g., Sierra Club, Audubon Club) as the vehicle to prevent selected large-scale projects on environmental, social, economic, or cultural grounds. It is easy to understand how this potential ability to halt a project could directly conflict with the federal government's tendency to encourage increased productivity in the private and public sectors of the economy (O'Conner, 1973). It is important, in understanding the SIA process, to recognize this conflict between the findings of a scientific social impact study and national economic concerns at the decision-making stage. Often the decision is made prior to the commission of an impact study, performing it simply to be in compliance with NEPA requirements (Wolf, 1974).

Level of analysis. A great majority of social impact studies approach the assessment from a macro level of analysis. The macro or community/regional changes are easier to understand and to measure (Burdge, 1977). Community social indicators (e.g., population, employment, crime statistics) are often used exclusively in the preparation of

a social impact assessment (Lewis, 1980). Though traditional social indicators are useful in SIA, the exclusive use of this approach eliminates an individual orientation. A number of researchers have identified the exclusion of individual data from SIA as one of the field's greatest weaknesses (e.g., Gold, 1977; Lewis, 1980; Burdge, 1977; Schnaiberg & Meidinger, 1978; Deane and Mumpower, 1977). Burdge (1977) commented that the "real" social impacts are felt at the individual level in large-scale developments and that these impacts should be uncovered, he suggests, through "almost investigative personal interviews."

A related level of analysis problem in SIA is the dominant use of objective data (e.g., census data, crime statistics, traffic counts) in impact assessment almost to the exclusion of any subjective information. One important reason for this inadequacy is that the objective information is often easily accessible and already collected. Again, community social indicators and census data are collected regularly, are easy to obtain, and are much cheaper to use than collecting personal interview or questionnaire data. Also objective data are more easily quantifiable and are seen as more scientific, rigorous, and precise. At times, a researcher collects the pertinent scientific data and writes the assessment without ever visiting the project site, talking to citizens or community leaders in the impacted area, or collecting any information other than already published statistics (Lewis, 1980).

Another common criticism of the "level of analysis" of SIA is the de-emphasis of the social-psychological level of analysis in comparison

to strictly economic impacts (Deane & Mumpower, 1977). The difficulty in placing a dollar figure on "social-psychological" impacts of a large project is a primary reason for this problem. But this does not excuse the common practice of only assessing economic impacts labeling them socioeconomic impacts and producing a social impact assessment (Schnaiberg & Meidinger, 1978). The economic emphasis has developed, in part, because of the frequent use of cost-benefit analysis. This procedure forces a dollar figure on all impacts, both positive and negative, and often results in an emphasis on the easily measured economic benefits that are already in dollar figures (Schnaiberg & Meidinger, 1978). Other problems exist with cost-benefit analysis as a method for SIA and will be more fully dealt with in a later section.

The value position that emphasizes the importance of impacts upon individuals and their social environment, using subjective data at social-psychological level, is well represented in the "writings" of SIA but not in its practice (Settle, 1976). Federal legislation and guidelines emphasizing "quality of life and well-being of all people" are also numerous (Deane & Mumpower, 1977). Wolf (1974b) considered social-psychological effects to be primary rather than secondary effects of projects. It is also considered important by a number of researchers (e.g., Andrews, 1974; Deane & Mumpower, 1977; Lewis, 1980) to measure these social-psychological impacts using individual, subjective data. The major difficulty is in the time and expense of collecting these types of data when the objective, regional and/or economic data are routinely collected by the government.

Cost-benefit analysis. The method most often used in impact assessment studies is cost-benefit analysis (Schnaiberg & Meidinger, 1978). This procedure has a number of disadvantages for SIA (Conopask & Reynolds, 1977). First, because cost-benefit analysis assigns a dollar value to all impacts, both positive and negative, often the social impact study is actually a social-economic impact study. Economic indicators and statistics are already in a dollar format and often collected routinely by government agencies. Noneconomic data (e.g., community and life satisfaction, perceived impacts, attitudes toward the project) are not easily put in dollar format and are not easily attainable from already published sources. Consequently, economic impacts are often overemphasized.

A related disadvantage of cost-benefit analysis as a decision-making tool is that economic impacts of most large-scale projects are primarily beneficial, especially in the short-term (Corteze & Jones, 1979). Increases in business, more jobs, and an excellerated local economy are almost always considered in the cost-benefit equation, but just as often impacts such as traffic congestion, forced migration, increased noise, and housing shortages are ignored. This orientation also has a cumulative effect on the literature of SIA resulting in an overemphasis on economic impacts. The new researcher in the field depends on this accumulated literature and lists of social impacts dominated by economic concerns. The methodology for collecting and analyzing economic data are numerous in comparison to noneconomic variables. This is especially critical because these noneconomic variables are considered more difficult and expensive to measure (Schnaiberg & Meidinger, 1978).

Another disadvantage of cost-benefit analysis and its subsequent emphasis on economic variables is that agencies and/or corporations that provide the economic information (e.g., predicted employment, wages, new money into community) often stand to gain by the implementation of the project. This problem is coupled with a long history of understating projective costs of implementation and overestimating the positive economic benefits of the proposed project in order to make it attractive to funding sources (Schnaiberg & Meidinger, 1978).

In the final analysis, positive economic benefits are typically overestimated, costs of the project are often underestimated, and negative social impacts are usually ignored. Thus, the cost-benefit method produces findings that more often than not encourage the implementation of the project. Further, mitigation of negative impacts are not considered because they were not recognized and the overwhelming economic benefits are considered "payment" for any potential negative impacts overlooked (Daffron, 1975).

Differential impacts. One of the most glaring inadequacies of existing SIA efforts is the lack of past information and ongoing research on differential impacts of large-scale projects across different sectors of society (Wolf, 1974; Schnaiberg & Meidinger, 1978; Friesema & Culhane, 1976; Peele, 1974). Shields (1975) has described differential impacts as:

The impacts of high technology projects as they affect different people in different ways at different times. Some people lose a great deal, others gain, and others most probably fall somewhere in between, gaining in some ways, but losing in others. And there are certainly some—indeed, many—who are virtually unaffected by project impacts. So it is quite clear that distributional impacts are what social impact assessment is all about. (p. 280)

This lack of differential analysis is particularly ironic because of our society's alleged commitment to social equality (Bonnen, 1970; Rein, 1972) and social science's long-standing tradition of emphasizing the adverse effects of social inequity (Seeman, 1959; Rappaport, 1977; Rainwater, Bettelheim, Friedberg, & Voneckardt, 1971; Ryan, 1971). Despite our society's equality commitments, many public programs are administered with little attention to their differential impact. We almost always fail to collect information on differential aspects of programs (Bonnen, 1970).

Most of the problems of SIA previously discussed help explain the paucity of research on differential impacts. First, social sciences' theoretical contributions concerning inequity, and unequal distribution of resources (e.g., Walster & Walster, 1975; Rainwater et al., 1971) have been generally ignored by researchers in SIA. The concentration on objective, macro level data, though not eliminating differential analysis, hinders research on differential impacts across different social groups because these data ignore what Burdge (1977) called real, individual negative impacts discovered by interviewing people. This is especially important when considering the "human side" of impacts (e.g., loss of employment, breakdown of community and natural support systems) affecting some social groups more than others. Of course, the emphasis on cost-benefit analysis, with the goal of producing one general, overall indicator of impact further impedes differential analysis.

Though these problems are detrimental to assessing social impacts across different sectors of a community, the "politics" of the SIA process

have been singled out as the prime obstruction to differential analysis (Friesema & Culhane, 1976; Schnaiberg & Meidinger, 1978).

Certain important social impacts of major federal actions are largely taboo subjects for public documents . . . , even though they may be important considerations in agency decision-making. These would include certain political considerations, and often any measures of differential social impacts among status, class, or cultural groups. (Friesema & Culhane, 1974, p. 5)

It is commonly agreed by writers in SIA that large-scale projects do have a differential impact across groups in society (Friesema & Culhane, 1976; Peele, 1974; Schnaiberg, 1975, 1977; Shields, 1977). For example, Mumford (1963) pointed out the differential environmental and social effects of the rich and poor throughout the history of industrialization. When discussing the coal industry in Appalachia, Caudill (1976) concluded that the original residents of the area, including those who have become miners, have paid the social costs while the industry has reaped a majority of the benefits. In the most general terms, large-scale projects have typically favored those in society that have economic and political resources when compared to those without resources (Daffron, 1975). Further, those who have benefited most from these projects have "least felt the sting of local and regional disruption while the relatively immobile local and regional working and poverty classes have historically suffered from such ecological disruption—i.e., have paid the costs" (Schnaiberg & Meidinger, 1978, p. 29).

Presently, there are few empirical studies that have attempted to assess how positive and negative impacts differentially affect individuals and groups in society. But this should not be used in justification for further ignoring the issue that both Peele (1974) and

Shields (1975) have called the crucial question of SIA. Schnaiberg and Meidinger (1978) believe that those who have suffered the most "both economically and ecologically" in the past are most likely to suffer the future negative impacts of large-scale projects simply due to a lack of wealth and power. The first step to changing this ongoing process is to make the public, and those who gain the least and/or pay the most, aware of the differential impacts of large-scale projects through an empirical study followed by dissemination of the results.

A Community Psychology's Perspective on Social Impact Assessment

In an effort to deal with these common but serious problems of SIA, the present study was partially guided by the broad theoretical and empirical orientation of community psychology. Community psychology's orientation to applied research, social problems and, in particular, to the question of differential effects of planned social change, has advantages for the study of social impacts. A brief statement on this orientation and its relevance for the study of social impacts at the social-psychological level is presented. Then some specific advantages of this orientation for the previously delineated problems of SIA are discussed. Finally, the theoretical background concerning differential impacts that has been adopted by community psychology leads into a presentation of the alienation theory of Seeman.

Community psychologists view most social problems and problems related to adequate human functioning as relevant to community psychology (Rappaport, 1977). Murrell (1973) argued that as the field evolves,

community psychologists will be identified more by their "strategy orientation" than their specific content area. Consequently, the application of community psychology may be in any content area that allows consistency with its values and strategies. The most comprehensive attempt at a definition of the orientation of community psychology comes from Murrell (1979) and includes a majority of considerations of other prominent writers in the area (Goodstein & Sandler, 1978; Heller & Monahan, 1977; Rappaport, 1977).

Community psychology is a strategy, composed of a data-based person-environment fit perspective and the methodologies of social science and general systems, to be applied, in collaboration with others, to the development of facilitative social systems, particularly human resource programs. (Murrell, 1979, p. 21).

In discussing the relevance of a community psychologist as a social planner, Catalano and Monahan (1975) encouraged those in the field to live up to their "theoretical commitment to an ecological position" by engaging in large-scale interventions in the natural environment. One course they suggested as an opportunity to effect environment and social change for the psychological well-being of individuals was through the EIS process. They argued that a community psychologist should be involved: (a) in determining if an EIS is needed, (b) in reviewing the initial EIS, and (c) in certifying the final EIS as adequate. Community psychologists can participate in this process in order to predict the impacts of a new project on human services, psychological problems and overall quality of life, and to suggest strategies to deal with these concerns (Catalano & Monahan, 1975). In the most recent text on community psychology, Phillip Mann (1979) stated that an "intervention

principle" of the ecological model of community psychology is to attempt to measure the impacts of an intervention on individuals and reduce the negative effects and enhance the positive effects of that intervention. Though Catalano and Monahan were clearly discussing concerns at the social-psychological level, Mann directly asserted the relevance of this level of analysis for community psychologists because of the history of neglect of the "human behavior aspect" in favor of economic and architectural-structural considerations.

One example of a high point of this latter kind of activity might be working to create a requirement for, and participating in the preparation of, social-environmental impact statements that precede the implementation of technological and social developments, similar to the statements concerning the physical environment that are now required in many instances. (Mann, 1979, p. 18)

Community psychology's strong emphasis on empirical studies of social concerns in the natural environment is an excellent approach for social impact research. Many community psychologists would appreciate the difficulties of doing applied research on large-scale interventions in a community setting. Both community psychology and SIA stress the importance of interdisciplinary research. In reality, the fields are dominated by psychologists and sociologists, respectively, but researchers interested in community psychology are beginning to appreciate the relevance of SIA to their field (cf., Catalano & Monahan, 1975; Mann, 1979; Meissen et al., 1980; Sundstrom et al., 1977). Community psychology's emphasis on person-environment fit is a relevant orientation for studying social impacts. How a proposed project will effect "changes in interpersonal relationships, perceived well-being, or quality of

life" (Llewellyn, 1974) is a natural overlap for a community psychologist interested in the effects of planned social change and a social impact assessor interested in the impacts on the "human side" of a large-scale project.

Politics or Science?

An important consideration concerning community psychology is the field's involvement in the political sphere. Rappaport (1977) argues that community psychology, as well as applied social science in general, must be political because the link between social science and the study and development of "human resources" is politics. A related concern of community psychology is citizen participation. This approach calls for surveying the views of citizens in the area one is working, with special emphasis to the "targeted" consumer or client of the proposed action. When discussing democratic participation and planned social innovation, Fairweather and Tornatzky (1977) stated:

Thus the scientist must work cooperatively with the elected officials or their appointed administrators who are responsible for program development and, in addition, with a representative group of persons who are suffering from the problem and who will have their own perceptions about how such problems might be solved. (p. 17)

These authors acknowledge that the political process and democratic participation cause problems (e.g., delays, extra cost, administrative details), and conflict with traditional views of science. But for a social scientist to ignore the political arena and the views of citizens and consumers is naive (Rappaport, 1977), and could prevent acceptance of the desired program or innovation (Fairweather & Tornatzky, 1977).

This acceptance of political activity as part of the context of applied research and planned social change is the attitude that many writers in the field of SIA have found lacking (e.g., Friesema & Culhane, 1976; Lovejoy, Baden, & Kremp, 1978; Wolf, 1974). They also have tended to agree that politics is a reality in SIA and have encouraged, though reluctantly, the involvement of social scientists in the process.

Level of Analysis

Community psychology emphasizes the study of interventions at an institutional and community level but the unit of analysis is primarily the individual (Rappaport, 1977). This orientation is consistent with the view of Burdge (1977) that real social impacts are felt at the individual level. Concomitantly, the orientation of community psychology would encourage the use of subjective information especially when dimensions such as perceived quality of life, expectations, and attitudes are important. Finally, the need for data at the social-psychological level of analysis has been stressed by community psychologists interested in the field of SIA (Catalona & Monahan, 1975; Mann, 1979).

The complete abandonment of macro level, objective, and/or economic information would not be appropriate. A great deal can be understood from these types of data and they are usually less expensive and easier to obtain. The point is that community psychology's orientation would emphasize the importance of impacts upon individuals and their social environment and would advocate the use of subjective as well as objective data at a social-psychological level to estimate these impacts. This orientation has been neglected in SIA and a number of writers in the

field have encouraged this type of approach to compliment traditional cost-benefit analyses (Deane & Mumpower, 1977; Gold, 1977; Lewis, 1980; Schnaiberg & Meidinger, 1978).

Subjective versus objective data. The controversy over subjective versus objective data has been discussed in the social sciences for years. One area that precipitated a great deal of this debate was the interest in social indicators and the quality of life. The early sixties saw a tremendous development in objective social indicators (e.g., population growth and movement, employment, health, income, education), and their use to assess the quality of life. The reaction of many social scientists to this trend can be represented by the view of Angus Campbell (1976, p. 118):

If we believe that the quality of life lies in the objective circumstances of life, these measures will tell us all we need to know; but if we believe, as I assume most psychologists do, that the quality of life lies in the experience of life, then these are surrogate indicators. They describe the conditions of life that might be assumed to influence life experience, but they do not assess that experience directly.

A majority of studies that have attempted to relate the objective social indicators with subjective measures of the quality of life have found little evidence of an empirical relationship (e.g., Liu, 1973, 1974; Schneider, 1975, 1976). The two most comprehensive studies of the quality of life to date have been done by Campbell, Converse, and Rodgers (1976) and Andrews and Withey (1976). Both of these research teams strongly defended the use of subjective data in the attempt to measure needs, perceptions, evaluations, and satisfaction concerning the quality of life and related concepts because of the desire for a realistic assessment of

individual life experience (Kennedy, Northcott, & Kinzel, 1978).

Considering the emphasis that the federal government and social scientists have given to the quality of life, community satisfaction, and related concepts in reference to SIA, subjective individual data appear an important but neglected level of analysis. The present study emphasized the use of subjective measures in order to assess directly such dimensions as quality of life, attitudes toward the project, and expectations concerning potential impacts. These types of variables are viewed as important to the study of social impacts, especially for differential analysis (Schnaiberg & Meidinger, 1978). Also the use of subjective data would compliment the already collected objective information collected in the EXPO 82 EIS (Haworth & Anderson, 1977).

Beliefs. The present study dealt primarily with beliefs as opposed to attitudes. Following the distinctions put forth by Fishbein and Ajzen (1975), a belief is a subjective probability of a relationship between the object of the belief and another object, event, value, behavior, concept, attribute, or other belief. Thus, a person may hold a belief that an object has certain attributes, that certain events will occur, that certain events will lead to certain outcomes, that a given behavior will cause certain consequences, and so forth. The belief that something exists (e.g., there is a planet Mars) is different than the belief referred to above concerning the relationship between an object and some attribute or event (e.g., belief about Mars, Mars is mysterious).

In contrast to a belief, Fishbein and Ajzen (1975) defined an attitude as "the amount of affect for or against some object" (p. 11).

They warn against labeling all nonfactual data "attitudes," an unfortunate but common practice in the social sciences. The controversy concerning the relationship between attitudes and behavior (e.g., Ajzen & Fishbein, 1977; Schuman & Johnson, 1976; Wicker, 1969) is not relevant to the present study because the prediction attitudes or behavior was not the major focus of the study. The present study was primarily concerned with beliefs that certain events would occur resulting from EXPO 82 (e.g., traffic congestion, improved community spirit, housing shortages). The level of beliefs was then compared across a number of different groups.

A Theoretical Orientation to Differential Impacts

The field of community psychology has developed a rich and varied theoretical background primarily by "borrowing" theory from a number of sub-areas of psychology, as well as from other disciplines such as sociology, political science, and psychiatry (Rappaport, 1977). This development of theories that are consistent with the ideology of community psychology, especially some from social psychology and sociology, are directly relevant to SIA in general and specifically to differential impacts. Rappaport (1977) does an excellent job of delineating a number of these theories from the perspective of social change and the distribution of resources across different strata of society.

From these theoretical roots, Rappaport argued for a community psychology that perceives social problems or problems in living as a

function of the lack of resources rather than a failure of socialization. He stated that this condition is precipitated by a society which "selectively withholds two essential ingredients for well-being: power and money" (Rappaport, 1977, p. 115). Rappaport defines power in two ways: (1) the internal locus of control, in other words, "the person perceives that the event is contingent upon his own behavior or his own relatively permanent characteristics" (Rotter, 1966, p. 1), and (2) political and social control of the institutions that are part of one's existence (Rainwater, 1968; Ryan, 1971). Rappaport further argued that community psychology should focus on social interventions aimed at a more even distribution of power as he has defined it.

Rappaport suggested a blending of Rotter's (1966) individual conception of powerlessness with the sociological approaches of Rainwater (1968) and Ryan (1971) as a vehicle for understanding the intractable nature of social problems due to an uneven distribution of power and wealth in society. Rappaport credits the original integration of the psychological and sociological perspectives to Seeman's (1959, 1972a) alienation theory as it related to powerlessness and meaninglessness. Toch (1979) has independently expanded the original thinking of Rappaport by arguing for Seeman's alienation theory as not only relevant for understanding social problems but as a vehicle for social change. Moreover, Christenfeld (1979) has commented on the appropriateness of alienation theory for the orientation of community psychology when it is applied at the community or organization level:

Community psychologists who wish to promote well-being by encouraging autonomy and self-determination have recognized the

limits . . . we have a choice of intervention points, that we do not need to change societies to improve the quality of life in a community or organization. (p. 21)

Christenfeld was arguing for the use of Seeman's alienation theory as a base for a more equitable distribution of resources as did Rappaport. Where they differ is at the level of intervention. Rappaport argues for more wide-reaching societal change while Christenfeld promotes the idea of applying the perspective of community psychology and alienation theory where one can be effective—namely, in a specific community or organization.

The orientation of the present study attempted to adhere to the thinking of Christenfeld (1979) by applying the perspective of community psychology and alienation theory to the study of perceived differential Seeman's theory of alienation and the perspective of community psychology seem to be appropriate guides to the study of these impacts, based upon the assumption that differential social impacts do occur contingent upon levels of power and wealth.

Alienation Theory

Historical Perspective

The concept of alienation has rich theoretical and philosophical roots extending before Hegel (Schacht, 1970) and expanded upon most prominently by Marx (1963). In an excellent review of the philosophical, religious, and historical roots of the concept of alienation, Schacht (1970) commented on the many different meanings the term alienation has taken throughout history. Hegel, in his book Phenomenology of the Spirit

(Schacht, 1970), attempted to define the concept of alienation in two ways. Hegel first considered alienation as separation of individuals from the roles they occupy and the groups in which they live. This also included self-alienation. His second sense of alienation concerned "surrender" and has special emphasis on the surrender of the individual will in order to bring about complete harmony with the "universal will" or "state power." Hegel further argued that alienation as separation is overcome through alienation in the sense of surrender.

Karl Marx (1963) viewed alienation in a philosophical-political sense as separation through surrender. In other words, separation is a result of surrender: namely, the surrender of one's control over one's product and labor (Schacht, 1970). Marx used the term alienation in many different contexts and implied that alienation was related to a great number of social problems. Schacht argues that Marx set a precedent for later writers to generalize the concept without definition to virtually any problem. The philosophy and importance of the writings of Marx on modern social science have been discussed elsewhere (e.g., Hook, 1962; Schacht, 1970; Tucker, 1964). The point of this discussion is to establish Marx as the source and popularizer of modern deviations of alienation theory and its multitude of different meanings and applications. Further, since Marx discussed alienation in reference to an individual's sense of personal estrangement as well as surrender to the state, he gave roots to both individual and societal interpretation of alienation.

Seeman's Alienation Theory

Seeman's (1972a) purpose in developing his ideas on alienation were two-fold: (1) to suggest a modern alienation theory to bridge the gap between empirical, psychological views relevant to the topic, and the rich sociological theory and literature. "I propose to treat alienation from the personal standpoint of the actor—that is, alienation is taken from the social-psychological point of view" (Seeman, 1959, p. 784). (2) To delineate and define the basic meanings or classifications that have dominated alienation theory historically in order to avoid the criticism of the over-generalization of alienation and to make these classifications more testable empirically.

Seeman (1959) distinguished the five most prevalent classifications of alienation, primarily from the sociological literature. Later, Seeman (1972a) added another meaning, making up the following list of six classifications of alienation: (1) powerlessness, (2) meaninglessness, (3) normlessness, (4) value isolation (cultural estrangement), (5) self-estrangement, and (6) social isolation. A complete explanation of all these classifications can be found in Seeman (1959, 1972a) and Dean (1961).

In order to arrive at an alienation theory from a social-psychological point of view, Seeman attempted a union of mass society theory and Rotter's (1966) concepts of internal and external locus of control. The major theme of mass society theory was that the changing conditions of a modern society (e.g., industrialization, urbanization, mass communication, centralization of authority, high technology) have created, among other things, a feeling of insignificance and ignorance

in individuals (Shils, 1962). Seeman (1966, 1967) argued that these are forms of alienation manifested in powerlessness and meaninglessness. He proposed that the measurement of powerlessness, or lack of control, over societal events be accomplished by the individual's feelings or expectations of control over the events. The same basic procedure had been proposed by Rotter (1966, 1975) to measure the internal versus external locus of control. Both Seeman and Rotter argued for the measurement of individual feelings of control over the social environment rather than an actual measure of the level of control.

Seeman's classifications of powerlessness and meaninglessness are particularly important to the theoretical orientation of the present study. A number of social scientists and writers in the field of SIA have discussed the adverse social effects of powerlessness in general (Rappaport, 1977; Rainwater, 1968) and specifically to the differential social impacts of a large-scale project (Daffron, 1975; Schnaiberg & Meidinger, 1978). Seeman (1966) also contends that a lack of control relevant knowledge is a manifestation of meaninglessness and leads to further powerlessness. Little pertinent knowledge of a large-scale project would also be detrimental to individuals susceptible to potential social impacts.

Powerlessness. The concept of powerlessness as it relates to alienation has its roots in the early writings of Hegel and Marx (Schacht, 1970). Seeman's views on powerlessness deviate in important ways from Marx and related sociological orientations. Seeman's version of powerlessness was conceived as the expectancy or likelihood held by

the individual that his/her own behavior cannot determine the occurrence of preferred outcomes (Seeman, 1959). Marx was more concerned with the objective societal conditions that related to alienation. Powerlessness has been typically defined in the Marxism tradition by an observer's view of the situation of powerlessness, which was compared against some ethical standards or idealistic level of individual power. Seeman's approach eliminates the need to determine these ethical and/or ideal situations.

Seeman (1959) considered the expectancies of an individual's control over social-political events the best area in which the concept of powerlessness as it related to alienation could be applied. More specifically, Seeman (1966, 1967, 1971) suggested that individuals who perceive little personal control over political events (powerlessness) would be characterized by feelings of political apathy, low political efficacy, and a low level of reported political activity. A great majority of the literature concerning alienation as it is manifested by powerlessness is contained in the political apathy and efficacy literature. A number of studies have found that individuals who perceive themselves as alienated in the sense of powerlessness were more politically apathetic, and had lower levels of actual and perceived political efficacy or control (e.g., Campbell, Gurin, & Miller, 1965; Thompson & Horton, 1960; McDill & Ridley, 1962; Strickland, 1965). In a more in-depth view of some of these studies, Dean (1960) and Erbe (1964) revealed that low levels of political efficacy, and political apathy also had a strong relationship with traditionally alienated groups

(e.g., low SES, Blacks, elderly). Both authors concluded that feelings of powerlessness were probably confounded with variables such as SES and race, making it difficult to determine to what degree alienation affected political activity in general. A large number of studies of voters have found a positive relationship between high feelings of powerlessness and low SES (e.g., Gold, 1962; Quinney, 1964; Foskett, 1955; Campbell, Converse, & Miller, 1960). Another group of individuals showing a relationship between political powerlessness and political inactivity were the elderly (Levin, 1960; Aiken & Ferman, 1966; Hughes, 1967). The conclusion drawn from this literature seems to support Seeman's notion that alienation exhibited by expectancies of political powerlessness were related to political inactivity and apathy, as well as to low SES level and being elderly.

Meaninglessness. The related concept of meaninglessness has been described by Seeman (1959) as the individual's ability to understand events in which he is a part, and the effect upon his life. Specifically he has defined meaninglessness as: "A sense of incomprehensibility of social affairs, of events whose dynamics one does not understand, and whose future course one cannot predict" (Seeman, 1972a, p. 472). Whereas powerlessness refers to an individual's perceived ability to control outcomes, meaninglessness refers to the individual's ability to predict outcomes. Seeman defends the theoretical independence of the two concepts but comments that the degree of understanding of events that surround an individual could, in some situations, be related to the degree of expectancy that his/her own behavior could control outcomes.

Seeman (1959, 1963, 1972a, 1972b) postulated that alienation as it relates to meaninglessness was characterized by a general lack of knowledge of important events surrounding the individual. Seeman (1966, 1967), in a study of working class men in Sweden, established a positive relationship between high feelings of political powerlessness and low amounts of knowledge of control-relevant information. These findings have been substantiated in similar studies (Saenger, 1945; Biderman, 1970). In a related study, McLeod (1965) found that alienated voters used the mass media for entertainment but not for information on political, control-relevant matters.

The use of Seeman's alienation theory will be used for two purposes in the present study. First, Seeman's theoretical constructs and related research findings will be used to develop different groups of participants that have been characterized as more alienated (e.g., politically powerless, less knowledgeable, low SES, elderly). Many social scientists in SIA discussed earlier have suggested that these same groups tend to experience less positive and more negative impacts of large-scale projects. Second, Seeman's alienation theory will be tested by comparing these groups (e.g., high versus low perceived powerlessness) across the perceived expectancies or likelihood of negative and positive impacts as they relate to EXPO 82. The use of perceived expectancies is consistent with the social-psychological approach of Seeman and past research in SIA (e.g., Lounsbury et al., 1979; Sundstrom et al., 1977). Also, the assessment of the likelihood of impacts has been specifically suggested for differential analysis of social impacts by Peele (1974), and Schnaiberg and Meidinger (1978).

EXPO 82

The International Energy Exposition (EXPO 82) is a "world's fair" type exposition that will be held in Knoxville, Tennessee, in the spring and summer of 1982. EXPO 82 is precipitating a major inner-city revitalization that will affect downtown Knoxville, as well as older, inner-city neighborhoods. EXPO 82 involves three distinct phases: construction, operation and residual use. The exposition is being sponsored by the Bureau of International Expositions (BIE) and is to be a Special Category Exposition (e.g., Hemisphere 68, San Antonio, Texas; EXPO 74, Spokane, Washington) as contrasted with a World's Fair (Haworth & Anderson, 1977).

The site of the exposition will be in the lower section of Second Creek, just west of the Knoxville business area. The site is also bordered by the University of Tennessee and the Fort Sanders area, an older residential neighborhood. A majority of the 66.5 acre site (reduced from 78.7 acres) has been used as a railroad yard (Haworth & Anderson, 1977). There are also warehouses, retail stores, and personal residences on the site.

Actual physical construction at the site began late in 1979 and will continue until just prior to the opening of the exposition in the spring of 1982. A major highway renovation will occur during this time. The actual exposition will operate from May 1, 1982, until October 31, 1982. Estimates range from 21,000 to 29,000 cars per day traveling to and from EXPO 82. In order to handle this traffic demand, the interstate

improvements must be finished and new parking facilities will need to be created (Haworth & Anderson, 1977).

The purpose of EXPO 82 is three-fold: (1) "to offer to the citizens of the world a greater comprehension of the effective use of energy and energy resources in the physical field and a more discriminating appreciation of creative energy in the artistic field" (Haworth & Anderson, 1977, p. 17); (2) to revitalize the downtown area of Knoxville—physically, economically and culturally; (3) to link the downtown area, the University campus and the Fort Sanders area, while ridding the city of an underdeveloped and "blighted" area.

Finally, it is important to note that the acceptance of Knoxville as the site for the exposition was a highly volatile political issue locally (e.g., Tomlinson, 1979). Though a number of local groups called for a referendum concerning local funding for EXPO 82, a referendum did not materialize. City Council appropriated 11.6 million in city bonds to the project in its own authority. State, Federal, and private funds have also been appropriated to help finance EXPO 82.

Rationale and Purpose of the Study

The present study took the approach suggested by Peele (1974), and separated residents into sub-groups that could potentially experience differential impacts due to EXPO 82. The rationale for developing the sub-groups for comparison of potential impacts is based primarily on Seeman's alienation theory and subsequent research on the dimensions of powerlessness and meaninglessness cited above. Previous research on the

impacts of large-scale projects also aided in developing sub-groups for comparison of potential impacts. The primary purpose of the present study was to compare the groups on the perceived likelihood of positive and negative impacts. The use of perceived likelihoods or expected impacts for the study of differential social impacts is consistent with Seeman's approach of using expectancies as a social-psychological measure of alienation. The rationale for use of other subjective data, such as avowed quality of life and perceived political efficacy, was discussed above and have been used in other social impact studies (e.g., Clemente, 1973; Lounsbury et al., 1977; Napier, 1972).

Another purpose of the study was to test the utility of Seeman's alienation theory for the study of social impacts, especially differential social impacts. Past research on alienated groups show them to have similar characteristics to groups identified in the few differential social impact studies cited. These alienated groups are also similar to segments of society that Rappaport identified as "lacking resources." Finally, Seeman's alienation theory will be used in conjunction with the theoretical orientation of community psychology and relevant SIA research to formulate a model concerning the effects of powerlessness and meaninglessness on individuals' perceptions of the likelihood of positive versus negative impacts, as well as attitudes and political activity related to the project. Due to the lack of theoretical work in the literature of SIA and the exploratory nature of the present study, a broad hypothetical model was proposed.

A secondary purpose for the study was to obtain a baseline of residents' subjective responses and attitudes prior to construction in

order to allow for assessment of later social and psychological changes that could accompany the ongoing construction and operation of EXPO 82. A reassessment of attitudes and beliefs of local residents during and after the actual World's Exposition in 1982 might be of particular interest to researchers in the future.

Hypothesized Model of the Effects of Alienation on
Perceived Social Impacts, Attitudes, and Political
Activity Related to EXPO 82

In order to evaluate the usefulness of Seeman's alienation theory and the orientation of community psychology to the study of differential social impacts, attitudes, and political activity related to EXPO 82, the technique of path analysis was used (Land, 1968; Duncan, 1975). Path analysis is a statistical technique that allows the development of a casual model from relevant theory and past research. The basic assumptions of path analysis are that relationships between variables are linear, and the cumulative effects of the variables are additive, not interactive (Duncan, 1966). Another important assumption of path analysis is that the variance not found within the model is random variance. It is an especially useful technique when a number of possibly interrelated variables are suspected of having an impact on the dependent variables of interest. The model can then be tested by developing regression equations where certain variables are represented to be dependent on others as linear functions. Regression equations are developed in which each of the dependent variables is regressed on to the variables hypothesized in the model to be related to the dependent variables, typically, all variables in the model appearing before the dependent variable in the casual

sequence. The resulting beta coefficients obtained from the regression analysis are used as path coefficients. Independent variables that did not account for a significant amount of the variance in the dependent variable can then be dropped and the resulting regression equation can be recomputed to obtain the final path coefficients. Strictly as a statistical technique, path analysis adds nothing to regression analysis applied to develop a system of equations instead of a single equation (Duncan, 1968). But path analysis is useful as a "pattern of interpretation" in understanding the model hypothesized; first, because it explicitly states what the model is and its casual sequences. Second, it allows examination of both direct and indirect effects of the independent variables on the dependent variables of interest.

The model hypothesized in the present study is presented in Figure 1. The casual sequence of the variables are ordered from left to right, also shown by the direction of the unidirectional vectors or paths. For example, education was hypothesized to affect individuals' ratings on the importance of general information sources and their feelings of general political efficacy. Below is a discussion of the rationale for the hypothesized model. The hypothesized model will be evaluated using the path analysis techniques discussed above.

The model specified income (X_a), age (X_b), education (X_c), and race (X_d) as exogeneous variables or variables with no hypothesized antecedent causes directly relevant to the proposed model. All of these variables are related to SES which have been shown to be related to alienation in general, and to powerlessness and meaningless specifically (Gold, 1962; Erbe, 1964; Quinney, 1964). Rappaport (1977) also discussed

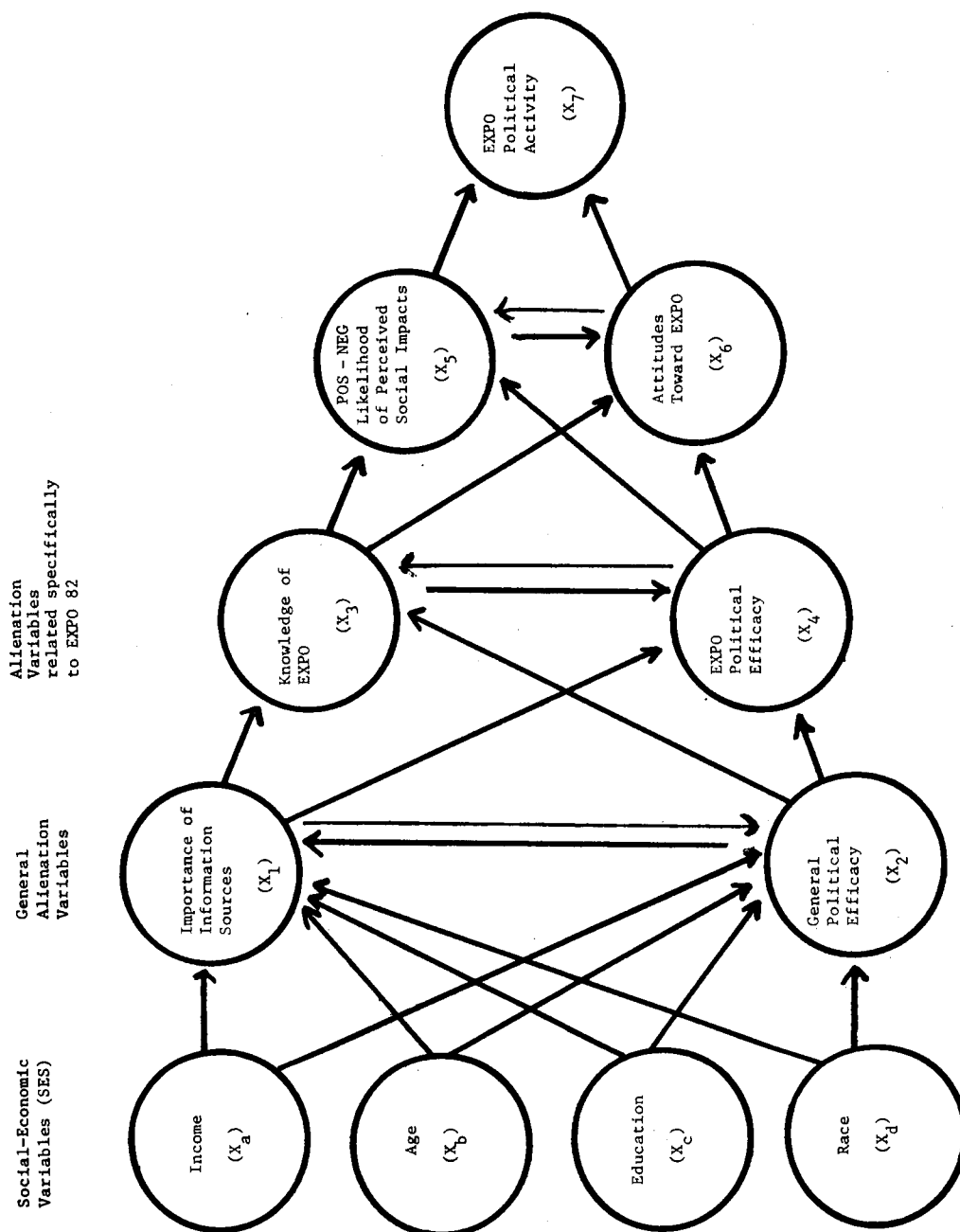


Figure 1. Hypothesized model of the effects of alienation on perceived social impacts, attitudes, and political activity related to EXPO 82. (A unidirectional vector between each variable to every other variable to its left is assumed in the model. These vectors were omitted for reasons of clarity.)

the effects of low SES in regard to individuals' perceived and actual lack of "clout" in dealing with relevant events in their lives. Finally, many researchers in SIA have related more negative and fewer positive social impacts to those of a lower SES level (Peele, 1974; Llewellyn, 1974; Krebs, 1975). The effects of SES and age on the positive versus negative impacts of EXPO 82 were also examined through bivariate analysis, but it was considered important to include these variables in this multivariate model as well. It was assumed that income, age, education, and race were intercorrelated but no effort was made to explore these possible intercorrelations. What was important in the model was the effect of these variables on the measure of powerless (general political efficacy, EXPO political efficacy), and meaninglessness (importance of information sources, knowledge of EXPO) as well as the other dependent variables related to EXPO 82.

The next set of variables entered in the model were the general indicators of alienation (i.e., importance of information sources (X_1) and general political efficacy (X_2)). Campbell, Converse, and Miller (1960) found that Blacks and those of low income and education felt less politically powerful than those at higher levels of income and education. Erbe (1964) also found that Blacks and the elderly had low levels of political efficacy. These studies, as well as others reported above, suggest that SES level was related to feelings of political efficacy. Hence, general political efficacy was entered into the model as being causally dependent on the four SES variables as well as the other general indicator of alienation, importance of information sources. This is consistent with the theoretical work of Seeman (1959, 1972a) and the writings of Rappaport (1977). Seeman (1966; 1967) found that feelings

of general political efficacy were related to individuals' level of control-relevant information about both general and specific political and social events that surrounded them. This is consistent with the present model that hypothesized that feelings of general political efficacy would affect the level of knowledge that individuals had concerning EXPO 82 specifics as well as the importance of relevant information sources. The model also hypothesized that feelings of general political efficacy would affect feelings of EXPO 82 political efficacy, which is consistent with the writings of Seeman (1972). Finally, general political efficacy was hypothesized to be related to the likelihood of positive versus negative perceived social impacts of EXPO, as well as to attitudes and political activity related to EXPO 82.

The level of importance of information sources was found by McLeod (1965) to be a good indicator of alienation on the dimension of meaninglessness. He found that individuals who were alienated tended to have lower use rates and more negative opinions of the mass media as a source of control-relevant information. McLeod concluded that the mass media was important for those who were alienated and of low SES for entertainment but not for information. Biderman (1970) also found that education and race were important determinants of individuals' attitudes toward the use of media sources for political information. Consequently, importance of information sources was entered into the model as dependent on the four SES variables and general political efficacy. The general indicators of alienation, powerlessness (general political efficacy) and meaninglessness (importance of information sources), were hypothesized as correlated to be consistent with the theory of Seeman (1959, 1972a) and

his subsequent research (Seeman, 1966, 1967). The model further hypothesized that the level of importance given to information sources would affect feelings of political efficacy specific to EXPO 82, as well as knowledge of specific EXPO information. The initial model also had direct paths from the importance of information sources to the likelihood of positive versus negative perceived social impacts, attitudes toward EXPO, and EXPO political activity.

The next set of variables entered in the model were the indicators of alienation specific to EXPO 82 (i.e., knowledge of EXPO (X_3) and EXPO political efficacy (X_4)). These two variables were included in the model because they are indicators of meaninglessness and powerlessness in regard to EXPO 82 specifically. Seeman (1972) postulated that political efficacy concerning a particular issue can be at a different level than feelings of general political efficacy but that they are typically correlated. As mentioned above, measures of meaninglessness and powerlessness have often been related in the literature (e.g., Seeman, 1966, 1967). Consequently, EXPO political efficacy was placed in the model dependent upon both the general and specific indicators of meaninglessness (importance of information sources and knowledge of EXPO) and also dependent on general political efficacy. Knowledge of EXPO was placed in the model dependent on importance of information sources, and general and EXPO political efficacy. The basic arguments put forth concerning effects of the SES variables on the general indicators of alienation basically hold true for the EXPO specific alienation variables, hence, are hypothesized to have a direct effect on these specific indicators of alienation, as well.

The next set of variables entered into the model were attitudes toward EXPO (X_6) and the likelihood of positive minus negative perceived social impacts (X_5). Seeman (1972b) found that as feelings of powerlessness went up concerning a specific setting or object that attitude toward that object became more negative. More specifically, if workers had a high sense of power or control in the work setting, then attitudes toward that setting were higher. Seeman also found that level of knowledge as a measure of meaninglessness was correlated with feelings of efficacy and also contributed to individuals' attitudes toward the object of concern. As levels of knowledge increased, so did feelings of efficacy and attitudes toward the object. In the literature of SIA, Lounsbury et al. (1979) found the level of respondent knowledge did not directly affect attitudes toward a proposed nuclear power plant but knowledge was found to have a moderating effect between perceived likelihood of impacts and attitudes toward the plant.

In a related study, Sundstrom et al. (1977) found that the perceived likelihood of social impacts was an important determinant of respondents' attitudes toward construction of a nuclear power plant. Based on the above mentioned research, attitude toward EXPO 82 was entered in the hypothesized model as being dependent on the perceived likelihood of positive versus negative social impacts of EXPO 82, respondents' level of knowledge of EXPO specifics, and their feelings of political efficacy toward EXPO. The general indicators of powerlessness (general political efficacy) and meaninglessness (importance of information sources) were also placed in the initial model as being important to attitudes toward EXPO 82 as were the SES variables.

The primary variable of interest in the present study, the perceived likelihood of positive and negative social impacts, is a relatively unresearched area in the field of SIA and alienation. As mentioned above, this is partially due to the lack of research concerning differential impacts in general. Alienation research has found that knowledge of specific control-relevant information was dependent on SES variables, especially education, as well as levels of importance of information sources (McLeod, 1965; Seeman, 1966, 1967). Further research found that feelings of efficacy were also correlated with levels of respondent knowledge and that both knowledge and efficacy were important in determining attitudes toward the object of concern (Seeman, 1972a). The present model hypothesized that level of knowledge of EXPO 82 specifics and importance of information sources would influence respondents' beliefs concerning the likelihood of potential impacts. Since measures of meaninglessness and powerlessness have often been found to be correlated (Seeman, 1966, 1967, 1972b), measures of both general and specific efficacy were also hypothesized as being important in determining beliefs about potential impacts. SES variables were also seen as important to these beliefs and were included as well. In this manner, the direct and indirect effects of the individual SES variables can be determined. It was also deemed useful to examine the effects of attitude toward EXPO 82 on the beliefs about potential social impacts of EXPO. Though a number of these same variables will be examined in a bivariate analysis to assess their direct effects on the likelihood of positive and negative social impacts, inclusion of this dependent variable in the multivariate analysis would be informative.

The last variable entered in the model was the reported EXPO related political activity of the respondents. Seeman (1972b) found that workers with high levels of efficacy and knowledge tended to be more active in regard to the work setting. He also found in a different setting (Seeman, 1966, 1967) that individuals with low feelings of political efficacy and control-relevant knowledge tended to be politically inactive. A number of studies of voters have found correlations between political inactivity and alienation as measured by low political efficacy (e.g., McDill & Ridley, 1962; Strickland, 1965). Low SES levels have also been found to be correlated with political inactivity (Campbell et al., 1960; Campbell et al., 1965). Consequently, the SES variables, and both measures of meaninglessness and powerlessness were hypothesized as affecting EXPO political activity in the initial model. Mazur (1975), in a review of the literature regarding opposition to technological innovation, found that overall strong negative attitudes toward the innovation produced more political activity than did strong positive attitudes. This conflicts with the literature on voting where strong positive attitudes toward a candidate produced more activity than ambivalent or negative attitudes (Campbell et al., 1960). EXPO 82 is similar to many of the technological innovations cited by Mazur (e.g., fluoridation, urban renewal, nuclear power) in that it is designed to bring about community, social, and/or technological advancement, and has produced local political controversy. Hence, attitudes toward EXPO were hypothesized to affect EXPO political activity. EXPO political activity was also hypothesized as being dependent on respondents' beliefs

concerning the positive and negative social impacts of EXPO. This is consistent with the findings of Mazur (1975) where he found that individuals who felt a great deal would be lost by the acceptance of a technological innovation were more politically active.

In summary, the SES variables, income (X_a), age (X_b), education (X_c), and race (X_d) were placed in the present hypothesized model as casual variables of general alienation as measured by the importance of general information sources (X_1) and general political efficacy (X_2). The indicators of alienation related specifically to EXPO 82, knowledge of EXPO (X_3), and EXPO political efficacy (X_4) were entered into the model as causally dependent on the general alienation and SES variables. The EXPO specific and general alienation variables combined with the SES variables were then hypothesized as causing individuals' perceptions of the likelihood of positive versus negative social impacts resulting from EXPO (X_5) and attitudes toward EXPO (X_6). Finally, the initial hypothesized model enters the level of reported EXPO political activity (X_7) as dependent on all the preceding variables in the model (see Figure 1, page 51).

Specific Hypotheses

A different approach was used in developing the specific hypotheses of the present study. The likelihood of positive impacts was analyzed separately from the likelihood of negative impacts. It was determined that treating positive and negative impacts separately would complement the path model which combined them. Based on the theoretical construct that alienated individuals would perceive a lower level of political

efficacy or little personal control over sociopolitical events (Seeman, 1959, 1972), it is hypothesized that this sense of powerlessness will be exhibited by respondents perceiving fewer positive effects and more negative effects resulting from EXPO 82.

1a. Compared to participants who expressed a high level of political efficacy, participants who expressed a lower level of political efficacy will anticipate a greater likelihood of negative impacts and a lesser likelihood of positive impacts resulting from EXPO 82.

A related construct of Seeman's (1959, 1972a) theory of alienation suggested that individuals who perceive a lower level of political efficacy will exhibit lower levels of political activity. Again, following the same reasoning, one might anticipate perceived outcomes of EXPO 82 to be viewed less positively by the politically inactive. But Mazur (1975) found individuals who perceived personal losses resulting from technological innovation more politically active than those who perceived personal gains resulting from the innovation.

1b. The research question of interest is whether participants who reported a lower level of EXPO related political activity versus those who reported higher levels of political activity will differ significantly in their beliefs about the likelihood of positive versus negative perceived social impacts and in which direction.

Seeman (1966, 1967) found that alienated individuals with a lower sense of meaninglessness would be less knowledgeable about control-relevant information, also increasing their feelings of powerlessness. Consequently, participants with little knowledge of EXPO specifics might expect more negative outcomes resulting from EXPO 82. Lounsbury et al.

(1979) found that level of knowledge functioned as a moderator variable in relation to expected outcomes to influence support of nuclear plant construction. The same approach taken by Lounsbury et al. (1979) to assess the effects of respondent knowledge on attitudes toward the nuclear plant will be used to examine beliefs about the likelihood of positive versus negative perceived social impacts of EXPO 82. First, the level of knowledge will be tested for a direct effect on these beliefs.

2a. Compared to participants who have more knowledge about specific facts concerning EXPO 82, participants who expressed a lower level of EXPO specific knowledge will anticipate a greater likelihood of negative impacts and a lesser likelihood of positive impacts resulting from EXPO 82.

Second, knowledge will be examined to determine if it has a moderating effect on the relationship between attitudes toward EXPO 82 and beliefs about the likelihood of positive versus negative perceived social impacts related to EXPO 82.

2b. It is hypothesized that participants who showed a greater level of knowledge of EXPO specifics will have a stronger relationship between attitudes toward EXPO and their beliefs about the likelihood of positive versus negative perceived social impacts related to EXPO 82 when compared to those of a lower level of knowledge. In other words, knowledgeable participants' attitudes should be more highly correlated with their beliefs about potential social impacts than unknowledgeable participants.

Based on the synthesis of theory concerning uneven distribution of resources by Rappaport (1977), the research on powerlessness and low SES (e.g., Campbell et al., 1960; Quinney, 1964) and previous differential analyses of social impacts (Burdge & Johnson, 1973; Llewellyn, 1974) it was hypothesized that;

3a. Participants in low SES levels will anticipate a greater likelihood of negative impacts and a lesser likelihood of positive impacts due to EXPO 82 when compared to participants in higher SES.

A related impact reported by Breese et al. (1965) and Gilmore and Duff (1975) was that individuals who rented their homes were more seriously affected by large-scale projects because of overly-inflated rent prices in the impacted area. Based on these findings, it was hypothesized that:

3b. Participants who report renting their residences will anticipate a greater likelihood of negative impacts and a lesser likelihood of positive impacts due to EXPO when compared to participants who report buying or owning their residences.

A number of social impact studies have reported that elderly people experience more negative and less positive impacts resulting from large-scale projects (e.g., Clemente, 1973; Davenport & Davenport, 1979; Llewellyn, 1974). Further, Levin (1960) and Hughes (1967) found that the elderly perceived themselves as having less control over sociopolitical events than did other groups. Consequently, the elderly could expect more negative outcomes as a result of EXPO 82.

4. Participants 60 years of age or older will anticipate a greater likelihood of negative impacts and a lesser likelihood of positive impacts due to EXPO 82 when compared to participants less than 60 years old.

The language of NEPA and a great number of writers in the field of SIA (e.g., Schnaiberg & Meidinger, 1978; Burdge, 1973) have stressed the importance of the effects of large-scale projects on the quality of life. Lounsbury et al. (1979) found no direct relationship between avowed life satisfaction and expected outcomes of the construction of a nuclear plant, but did find that life satisfaction served as a moderator variable in relation to expected impacts and attitudes toward the nuclear plant. They found that respondents who reported a higher level of avowed life satisfaction had a stronger relationship between attitudes toward the plant and beliefs about potential social impacts. The same approach will be taken in the present study. First, the direct effect of reported quality of life on the beliefs about potential impacts will be examined and second, the effect of avowed quality of life as a moderator variable in relation to beliefs about potential impacts of EXPO 82 and attitudes toward EXPO 82 will be explored.

5a. Do participants who report a lower quality of life differ in respect to their beliefs about the likelihood of positive versus negative perceived social impacts of EXPO 82 when compared to those who report a higher quality of life?

5b. It is hypothesized that participants who reported a higher quality of life will have a stronger relationship between attitudes toward EXPO 82 and their beliefs about the likelihood of positive versus negative perceived social impacts related to EXPO 82 when compared to those who report a lower quality of life.

CHAPTER II

METHODS

Interviews

Interview Method

Participants. Participants were 335 residents of Knoxville, Tennessee. Forty-three percent of the participants were male and 57% were female. Blacks made up 14% of the sample; the rest of the sample (86%) being Caucasian. These figures correspond closely to the 13% Black, 87% Caucasian figures given for the total population of Knoxville (U.S. Department of Commerce, 1971). Average age of participants was 44 years, ranging from 18 to 91 years of age. The length of residence in Knoxville ranged from less than one year to 83 years, with a mean of 28 years.

Approximately 15% of all residents who were asked to participate in the survey refused to participate. Of these, 45% were male, 55% were female, and 21% were Black.

Interviewers. Interviewers were 20 undergraduate students; 10 men and 10 women. They were trained in administering survey instruments and interviewing techniques. Weekly meetings were held for the interviewers throughout the project in order to discuss any questions or difficulties. Each interviewer conducted either 15 or 20 interviews.

Sampling procedures. A multi-stage clustering technique (Babbie, 1973) corrected by the probability proportionate to the size of the population of the first cluster was used to obtain a sample of 335 households. The geographical area bounded by the city limits of Knoxville, Tennessee, was sampled. The first cluster of sampling units consisted of all census tracts inside the city limits. If a census tract was partially inside the city limits, that area inside the city limits was sampled. All census tracts were included to insure maximum generalization to the population of the city. Since the census tracts had large variations in the number of households each contained, the total number of households sampled within each census tract was proportionate to the total number of households in the city (Babbie, 1973). The second stage of the sampling consisted of randomly selecting the number of city blocks within a census tract that corresponded to the number of households needed from each census tract as determined by the probability proportioning procedure. All census tract and city block information was obtained from the 1970 Census of Housing, Knoxville, Tennessee (U.S. Department of Commerce, 1971).

The third and final stage of sampling consisted of randomly selecting a single household for interview, plus five randomly and sequentially selected alternative households for each previously selected city block. This final stage of sampling resulted in the selection of 335 households targeted for interview, each with five alternative households selected. All information on individual households within a selected city block (e.g., number of houses on block, address of selected

households) was obtained from the Knoxville City Directory (1979). The rationale for the large number of alternative households selected was to prevent the interviewer from having to return to the same block many times to find an individual of a household at home. Also, this procedure took into account the possibility of interviewee refusal, vacant houses, residents on vacation, houses torn down, and any other problem that would prevent a single household from being contacted. Since alternatives were randomly and sequentially selected, this also insured the randomness of the final sample. This procedure is seen as superior to the common practice of allowing the interviewer to systematically select alternative households if the original household selected could not be contacted.

Interviewing procedure. Interviewers were given 15 or 20 specific addresses of households, each address having five randomly and sequentially selected alternative addresses if needed. Maps and detailed instructions were included. Interviewers were instructed to go to the randomly selected address without advance notice, and read a standardized statement (Appendix A) asking an adult resident of the household, preferably either the male or female head of household, to participate in the interview. If the interviewer was not able to conduct the interview at this address for any reason, he/she was to go to the first alternative address and attempt to conduct the interview. This procedure was to be followed until an adult resident of a selected household granted an interview. If the interviewer was unable to obtain an interview from either the initially selected household or any of the five alternatives, he/she was instructed to return to that block at a

different time. Interviews were primarily conducted in the evenings and weekends between July 26 and August 15, 1979.

Once a resident verbally agreed to participate, the interviewer would read to the participant the consent form to insure participant understanding (see Appendix B). The participant was then allowed to examine the consent form and if the participant agreed to sign it, the interview was conducted. In conducting the interviews, interviewers wrote the responses directly on the questionnaire. Interviews lasted approximately 30 minutes. Participants were volunteers and did not receive any remuneration.

Survey Instrument

The survey instrument was a structured interview form that was used verbatim by the interviewers. Participant responses were also recorded on this form. A copy of the complete interview form is given in Appendix C. The present study did not report on all sections of the interview form. The sections used for this study are presented below.

Demographic information. Participants were asked to give their age, marital status, number and age of children, level of education, employment status, spouse's employment status, occupation, place of employment, total family income, how long they have lived in Knoxville, and if they own their home or any other property in the county (Section III, 1-14).

Political efficacy. Participants were asked to respond to questions concerning their personal sense of political power; e.g., Do you think your city government is responsive to people like you? (Section I, 2, 3, 4a; Section II, 1, 7, 9, 10, 12, 13, 14.)

Political activity. This section assessed the degree of political activity of the participants concerning EXPO 82. Participants were asked what they had done to express their opinion on EXPO. Possible responses ranged from "discussed feelings with family and friends" to "volunteered time to an organization." Participants were also asked to specify any other activity they had engaged in to express their opinion on EXPO. Another indicator of political activity was the intention to vote in a referendum on the EXPO issue if given the opportunity (Section II, 4 a-j, 8, 11).

Knowledge of EXPO 82. This section assessed the level of knowledge that participants possessed concerning specific facts about EXPO 82. Participants were asked where the EXPO 82 site was located, how long EXPO 82 was scheduled to last, who was funding EXPO 82, and who was to buy and own the EXPO 82 site. All specific facts participants were asked about had been repeatedly presented in the local media (Section I, 9 a-h).

Quality of life. This section assessed the overall quality of life of the participants. Cantril's (1965) ladder was the first measure used to obtain an overall indicator of quality of life. Participants were asked to represent their quality of life five years from now, five years

ago, and presently on a 11-point scale ranging from 0 (worst possible life) to 10 (best possible life). Participants were also asked: "How do you feel about your life as a whole?" (Andrews & Whitley, 1976) and asked to respond on a 7-point Likert-type scale ranging from 1 (terrible) to 7 (delighted) (Section I, 7a-c, 8).

Likelihood of impacts due to EXPO 82. Interviewers first read the following statement to the participants: "Next I'd like to ask you some questions about community change and EXPO. If EXPO comes to Knoxville, a number of things in the community might change. I'm going to read you a list of things that could happen. Please tell me how likely each of these changes are. The first potential change is . . ." Participants were asked to indicate the likelihood of each potential change on a 7-point Likert-type scale ranging from 1 (certain to happen) to 7 (impossible to happen). The 22 potential changes were: downtown revitalization, bigger city atmosphere, increased traffic congestion, more public entertainment, more stores and shopping areas, increased business, increased noise, increased tourism, more and better jobs, increase in undesirables, housing shortages, increased land values, increased crime, improved mass transit, state, national, and international recognition of town, increased taxes, increase in visitors from foreign countries, parking problems, increase in city size, downtown parks, important energy capital, and improved community spirit. This list of potential changes was obtained from pilot work, discussions with EXPO 82 promoters and opponents, EXPO 82 EIS, and previous social impact research (Schuller et al., 1975).

Importance of information sources. Using a 5-point Likert-type scale ranging from 1 (very important) to 5 (very unimportant), participants were asked to rate the importance of the major sources of information in Knoxville, such as local newspapers, local radio, television, friends, co-workers, and meetings (Section I, 10a-i).

The measures of political efficacy were proposed as measures of alienation concerning powerlessness. Knowledge of EXPO and importance of information sources were proposed as measures of alienation concerning the dimension of meaninglessness. But these measures were not direct or strong measures of alienation. Instead, they were indicators of powerlessness and meaninglessness used in previous research on alienation.

CHAPTER III

RESULTS

The results of the present study are organized in the following manner. First, descriptive statistics of items dealing with respondents' opinions about EXPO 82, and about referendums concerning EXPO are presented. Next, the results of the analyses of variance used to check for significant differences in the perceived likelihood of positive and negative social impacts between different groups in the sample are given (Hypotheses 1a, 1b, 2a, 3a, 3b, 4, 5a). The results of the analysis of potential moderating effects of knowledge and quality of life on the relationship between the perceived likelihood of social impacts of EXPO 82 and attitudes toward EXPO 82 are also reported (Hypotheses 2b and 5b). Finally, a description of the path analysis model of the effects of alienation on the perceived social impacts, attitudes, and political activity related to EXPO 82 is presented.

Opinions About EXPO 82

The results of the items concerning opinions about EXPO 82 showed that respondents were more opposed to EXPO than in support of it. When asked "If it were up to you alone, would you allow EXPO 82 to be held in Knoxville?", 50% reported they did not favor the exposition. Thirty-eight percent said they would allow EXPO 82 if it were their decision, while 12% didn't know or were neutral on the issue. Surprisingly, about 87% of the respondents believed that EXPO 82 would occur even though

only 38% favored the exposition. Only 6% believed EXPO 82 would not occur while 7% did not know (see Table 1).

The results of the survey also showed that a majority of participants were in support of having referendums to decide important issues concerning EXPO 82. About 70% of the participants favored having a referendum concerning Knoxville as the site for EXPO 82. When asked how they would vote on such a referendum, 37% reported they would vote in support of having Knoxville as the site for EXPO 82 while 47% said they would vote against the city as the EXPO site. Approximately 16% said they would not vote on this issue if given the opportunity. Only 15% believed they would be given an opportunity to vote on a referendum concerning Knoxville as the site of EXPO 82. A great majority, almost 75%, believed such a referendum would never be held while 10% did not know (see Table 2). On the important issue of city funding for EXPO 82, about 66% of those interviewed favored having a referendum to decide the issue. About 26% said they did not favor a referendum on city funding while approximately 8% did not know. As shown in Table 2, only 27% said they would vote in support of city funding for EXPO 82 and 57% indicated they would vote against such a proposal. Almost 16% said they would not vote on the issue if given the opportunity. About 72% of the participants believed a referendum on city funding would not be held; about 16% believed such a referendum would happen, and 12% said they did not know.

The results of the present study showed that respondents believed they had little influence concerning decisions about EXPO 82 and thought EXPO 82 might not be in the best public interest. When asked how much

Table 1
Opinions Concerning EXPO 82

Participant Response	Favors Having EXPO 82		Believe EXPO 82 Will Occur	
	Frequency	Percentage	Frequency ^a	Percentage
Yes	128	38.2	291	86.9
Neutral/ Don't Know	39	11.6	24	7.2
No	168	50.1	20	6.0

^a_n = 335

Table 2
Opinions Concerning Proposed EXPO 82 Referendums

Participant Response	Percent of Participants Making Response ^a					
	Favor Having Referendum		Vote in Support of Referendum		Believe Referendum Will Occur	
	City as Site	City Funding	City as Site	City Funding	City as Site	City Funding
Yes	70.4	66.1	37.1	27.5	15.0	15.7
Don't Know/ Not Voting	6.6	7.8	16.3	15.9	10.5	12.0
No	23.1	26.1	46.6	56.6	74.5	72.3

^a n = 335

influence they felt they had on decisions about EXPO 82, 56% believed they had no influence. An additional 31% reported having very little influence concerning EXPO decisions, while 12% said they had some influence. Less than 1% of those interviewed believed they had a great deal of influence in the EXPO 82 decision making process. When asked if EXPO 82 involved a conflict between the interests of business and the public, about 68% replied in the affirmative. Approximately 22% believed there was no conflict and 9% did not know. Approximately 66% of those interviewed believed there was also a conflict between the interests of local government and the public as a whole. About 22% did not consider there to be a conflict between local government and the public interest over EXPO 82, while about 11% did not know.

Analysis of Differential Impacts

In order to determine whether there were significant differences between groups hypothesized as being differentially impacted by EXPO 82, one-way analyses of variance were performed using the likelihood of potential impacts as the dependent variable. Table 3 shows the mean, median, standard deviation of the likelihood items, and percentage of participants who considered the potential impacts likely to occur. In order to obtain a dependent measure of positive perceived social impacts, the sum of the likelihood scores of perceived positive social impacts were computed for each individual. The sum of the likelihood scores of the negative social impacts were also computed. The determination of the positive or negative nature of each potential social impact was handled

Table 3

Likelihood of Potential Social Impacts

Impact	Percent Likelihood ^a		Percent Who Believed Impact Likely to Occur
	Median	Mean	
Downtown Revitalization	2.67	2.81	69.2
Bigger City Atmosphere	2.94	2.95	63.6
Increased Traffic Congestion	1.26	1.50	96.1
More Public Entertainment	2.96	2.99	63.9
More Stores and Shopping Areas	3.07	3.02	63.7
Increased Business	2.38	2.52	78.0
Increased Noise	1.89	2.03	91.3
Increase Tourism	1.84	2.07	88.0
More and Better Jobs	3.04	3.04	61.0
Increase in Undesirables	2.79	2.77	71.2
Housing Shortages	2.74	2.81	69.7
Increased Land Values	2.72	2.87	66.9
Increased Crime	1.99	2.18	86.1
Improved Mass Transit	3.24	3.30	58.3
Recognition of Town	2.43	2.51	76.1
Increased Taxes	2.09	2.26	85.0
Increased Foreign Visitors	2.29	2.38	79.9
Parking Problems	1.42	1.76	94.0

Table 3 (continued)

Impact	Percent Likelihood ^a		Percent Who Believed Impact Likely to Occur
	Median	Mean	
Increased City Size	2.94	2.98	65.1
Downtown Parks	4.05	3.96	33.4
Important Energy Capital	3.76	3.64	40.8
Improved Community Spirit	3.84	3.81	39.7

^a Certain to Happen = 1; Impossible to Happen = 7

in two ways. First, some of the impacts were judged a priori to be either to be either positive or negative in nature. Those impacts labeled positive were: (a) improved community spirit, (b) downtown parks, (c) improved mass transit, (d) increased business, (e) more and better paying jobs, and (f) downtown revitalization. Those impacts labeled as negative were: (a) increased traffic congestion, (b) increased noise, (c) crowding in schools, (d) increase in undesirables, (e) housing shortages, (f) increased crime, (g) increased taxes, and (h) parking problems. The sum of the likelihood scores for the positive and negative impacts was then computed for each individual. Second, the determination of the positive or negative nature of the remaining potential social impacts was done on an individual basis. Table 4 shows the mean, median, and standard deviation of the desirability ratings, and the percent of participants who believed the potential social impact was desirable. If the impact was rated by the respondent as undesirable, the likelihood score for that particular impact was added to the sum of negative likelihood scores for that individual. If the impact was rated as desirable, the likelihood score for that impact was added to the sum of positive likelihood scores. The potential social impacts that were individually determined by the respondent as either positive or negative were: (a) more public entertainment, (b) more stores and shopping areas, (c) increased tourism, (d) increased land values, (e) state, national and international recognition of town, (f) increase in visitors from foreign countries, (g) bigger city atmosphere, and (h) increase in city size. If one of these potential social impacts was given a neutral rating, it was not

Table 4
Desirability of Potential Social Impacts

Impact	Desirability Ratings ^a			Percent Who Believed Impact Desirable
	Median	Mean	SD	
More Public Entertainment	4.75	4.74	1.16	59.7
More Stores and Shopping Areas	4.72	4.62	1.16	58.5
Increased Tourism	4.36	4.26	1.30	45.6
Increased Land Values	4.44	4.42	1.38	48.3
Recognition of Town	4.87	4.82	1.19	66.0
Increased Foreign Visitors	4.28	4.18	1.40	42.6
Bigger City Atmosphere	3.97	3.96	1.38	35.3
Increase in City Size	3.98	3.95	1.36	34.8

^aExtremely Undesirable = 1; Extremely Desirable = 7

added to either the positive or negative sums. This procedure resulted in a single indicator of positive impacts and a single indicator of negative impacts for each respondent. The summed likelihood scores of positive impacts ranged from 16 to 98 with a mean of 49.40, median of 47.29, and a standard deviation of 17.88. The summed likelihood scores of negative impacts ranged from 26 to 94 with a mean of 49.53, median of 47.39, and a standard deviation of 12.84. The sample was then divided into groups according to the individual hypotheses and compared on these two dependent variables separately, using one-way analysis of variance procedures. The individual hypotheses handled in this manner were Hypotheses 1a, 1b, 2a, 3a, 3b, 4, 5a.

Hypothesis 1a; Political Efficacy

The level of perceived EXPO political efficacy was measured by participants' responses to an item concerning their estimate of influence in the EXPO decision-making process (Section II, 1; Appendix C). Those that reported having a great deal or some influence in EXPO decisions were compared with those who reported very little or no influence across the perceived likelihood of positive and negative social impacts by separate one-way analyses of variance. There were 291 participants in the low EXPO political efficacy group and only 42 in the high efficacy group. When the high EXPO political efficacy group was compared to the low EXPO political efficacy group across positive social impacts, a significant difference ($F(1,333) = 62.86, p < .001$) was found (see Table 5). The mean value of the positive social impact scores for the high EXPO political efficacy group was 59.11 compared to a mean of 44.18

Table 5

Summary of Analysis of Variance of the Perceived
Likelihood of Positive Social Impacts of High
Versus Low Political Efficacy Groups

Source	d.f.	Sum of Squares	Mean Squares	F Ratio	p Value
Between Groups	1	16,965.95	16,965.95	62.86	< .001
Within Groups	333	89,875.61	269.90		
Total	334	106,841.56			

for the low efficacy group (see Table 6). Cochran's test for homogeneity of variance showed no significant difference in the variance of the likelihood score of positive impacts for the high and low group. The results show that the high EXPO political efficacy group perceived a significantly greater likelihood of more positive impacts resulting from EXPO than did the low EXPO political efficacy group. A significant difference was also found between the high and low EXPO political efficacy groups ($F(1,333) = 27.94, p < .001$) on the summed likelihood scores of negative impacts (see Table 7). The mean for the high political efficacy group was 44.67 compared to a mean value of 52.15 for the low efficacy group (see Table 6). No significant difference in the variances of the negative likelihood scores for the high and low groups was found by Cochran's test for homogeneity of variance. The results show that the low EXPO political efficacy group perceived a significantly greater likelihood of more negative impacts than did the high efficacy group.

The level of perceived general political efficacy was determined by summing the responses to items 2, 3, and 4 in Section I of the survey (see Appendix C). These items dealt with respondents' feelings of personal efficacy toward city government in general. Groups of high and low general political efficacy were developed by dividing the summed efficacy scores at the median. There were 191 or 57% of the participants in the low general political efficacy group and 144 or 43% in the high efficacy group. In order to detect a significant difference between the summed likelihood scores of positive impacts, a one-way analysis of variance was performed. A significant difference ($F(1,333) = 13.66,$

Table 6

Means and Standard Deviations of the Perceived Likelihood
of Positive and Negative Social Impacts

Social Impact	n	Summed Likelihood Scores of Social Impacts			
		Positive		Negative	
		M	SD	M	SD
EXPO Political Efficacy*†					
High	42	59.11	18.12	44.67	12.32
Low	291	44.18	15.45	52.15	12.36
General Political Efficacy*†					
High	144	53.48	17.96	47.71	12.85
Low	191	46.32	17.24	50.91	12.68
EXPO Political Activity					
High	101	51.03	20.52	50.53	13.07
Low	234	48.70	16.62	49.10	12.74
Knowledge of EXPO					
High	159	50.45	18.47	48.45	12.17
Low	176	48.44	17.34	50.52	13.34
Socioeconomic Status*					
High	244	51.70	17.37	49.16	11.97
Low	91	43.22	17.88	50.53	14.94
Status of Residence					
Own	227	50.67	18.19	49.61	11.94
Rent	108	46.71	17.01	49.38	14.60
Age					
Under 60	257	50.41	17.92	48.84	12.87
60 or Over	78	46.05	17.48	51.82	12.55
Quality of Life*					
High	170	51.98	17.32	49.31	12.48
Low	165	46.73	18.12	49.76	13.22

*Significant differences found by one-way analysis of variance between the high and low groups on positive impacts. (See Tables 5, 8, 14, 20.)

†Significant differences found by one-way analysis of variance between the high and low groups on negative impacts. (See Tables 7, 9.)

Table 7

Summary of Analysis of Variance of the Perceived Likelihood of
 Negative Social Impacts of High Versus Low
 EXPO Political Efficacy Groups

Source	d.f.	Sum of Squares	Mean Squares	<u>F</u> Ratio	<u>p</u> Value
Between Groups	1	4,260.02	4,260.02	27.94	> .001
Within Groups	333	50,776.76	152.48		
Total	334	55,036.78			

$p < .001$) was found between the high and low general political efficacy groups (see Table 8). The mean of the likelihood of positive impact scores for the high general political efficacy group was 53.48 while the low efficacy group had a mean of 46.32 (see Table 6). Cochran's test for homogeneity of variance showed no significant difference in the variances of the likelihood scores of positive impacts for the high and low groups. These findings show that respondents with feelings of high general political efficacy anticipated a significantly greater likelihood of more positive impacts resulting from EXPO than the low efficacy group. A significant difference was also found between the high and low general political efficacy group ($F(1,333) = 5.17, p < .05$) on the summed likelihood scores of negative impacts (see Table 9). The mean for the high general political efficacy group was 47.71 while the mean value for the low efficacy group was 50.91 (see Table 6). No significant difference was found in the variance of the likelihood scores of negative impacts for the high and low group when tested by Cochran's test for homogeneity of variance. The results show that the low general political efficacy group expected a greater likelihood of more negative social impacts resulting from EXPO than did the high efficacy group.

Hypothesis 1b; EXPO Political Activity

The level of EXPO political activity was obtained for each participant by summing the total number of reported political activities related to EXPO (Section II, 4 a-7, i, 11; Appendix C). Groups of high and low reported EXPO political activity were developed by dividing activity scores at the median. The median number of activities reported

Table 8

Summary of Analysis of Variance of the Perceived Likelihood of
Positive Social Impacts of High Versus Low
General Political Efficacy Groups

Source	d.f.	Sum of Squares	Mean Squares	<u>F</u> Ratio	<u>p</u> Value
Between Groups	1	4,208.81	4,208.81	13.66	< .001
Within Groups	333	102,632.89	308.21		
Total	334	106,841.69			

Table 9

Summary of Analysis of Variance of the Perceived Likelihood of
 Negative Social Impacts of High Versus Low
 General Political Efficacy Groups

Source	d.f.	Sum of Squares	Mean Squares	<u>F</u> Ratio	<u>p</u> Value
Between Groups	1	842.13	842.13	5.17	< .05
Within Groups	333	54,194.68	162.75		
Total	334	55,036.81			

by participants was 2.95 and ranged from zero to nine. There were 234 or 70% of the participants in the low activity group and 101 or 30% in the high activity group. These two groups were then compared across the perceived likelihood of both positive and negative social impacts by separate one-way analyses of variance. These analyses found no significant differences between the high and low EXPO political activity groups (see Tables 10 and 11). Means and standard deviations for the groups are shown in Table 6.

Hypothesis 2a; Knowledge of EXPO

The level of knowledge of EXPO specifics was obtained by summing the number of correct responses to the eight questions concerning specific facts about EXPO (Section I, 9a-h; Appendix C). The median number of questions answered correctly was 4.36 with the mean of 4.25 answered correctly. Respondents who answered four or fewer questions correctly made up the low-knowledge group and respondents who answered five or more questions correctly made up the high-knowledge group. There were 176 or 52.5% of those interviewed in the low-knowledge group and 159 or 47.5% in the high-knowledge group. The perceived likelihood of both positive and negative social impact scores were compared for the two groups using separate one-way analyses of variance. These analyses found no significant differences between the high and low knowledge groups when compared on the dependent variables (see Tables 12 and 13). Means and standard deviations for the two groups are shown in Table 6.

Table 10

Summary of Analysis of Variance of the Perceived Likelihood of
Positive Social Impacts of High Versus Low
EXPO Political Activity Groups

Source	d.f.	Sum of Squares	Mean Squares	F Ratio	p Value
Between Groups	1	385.57	385.57	1.21	> .05
Within Groups	333	106,456.11	319.69		
Total	334	106,841.68			

Table 11

Summary of Analysis of Variance of the Perceived Likelihood of
 Negative Social Impacts of High Versus Low
 EXPO Political Activity Groups

Source	d.f.	Sum of Squares	Mean Squares	F Ratio	p Value
Between Groups	1	144.76	144.76	.88	> .05
Within Groups	333	54,892.11	164.84		
Total	334	55,036.86			

Table 12

Summary of Analysis of Variance of the Perceived Likelihood of
Positive Social Impacts of High Versus Low
Knowledge of EXPO Groups

Source	d.f.	Sum of Squares	Mean Squares	F Ratio	p Value
Between Groups	1	337.43	337.43	1.055	> .05
Within Groups	333	106,504.26	319.83		
Total	334	106,841.69			

Table 13

Summary of Analysis of Variance of the Perceived Likelihood of
Negative Social Impacts of High Versus Low
Knowledge of EXPO Groups

Source	d.f.	Sum of Squares	Mean Squares	F Ratio	p Value
Between Groups	1	358.23	358.23	2.18	> .05
Within Groups	333	54,678.67	164.20		
Total	334	55,036.90			

Hypothesis 2b; Knowledge as a Moderator Variable¹

In order to determine if the level of knowledge served as a moderator variable between the perceived likelihood of social impacts and attitude toward EXPO, the sample was again divided into high versus low knowledge of EXPO. Cochran's test for the homogeneity of variance found no significant difference in the variance of the perceived likelihood scores and attitudes toward EXPO between high and low groups. Pearson product-moment correlation coefficients were computed for the high and low groups between the beliefs about impacts and attitudes toward EXPO. These correlation coefficients were then compared by transforming each correlation to a Fisher's z value and using a Z statistic (Guilford & Fruchter, 1973) to test for significant differences. The correlation between the perceived likelihood of social impacts and attitudes toward EXPO was .45 for the low-knowledge group. The correlation coefficient for the high-knowledge group was .69. When compared using a Z statistic, the correlation coefficient for the high-knowledge group was found to be significantly greater than for the low-knowledge group ($Z = 3.44$, $p < .001$). This result shows that respondents' attitudes toward EXPO were more consistent with their beliefs about potential impacts of EXPO in the high-knowledge group when compared to the low-knowledge group.

¹When the correlation between two variables changes as a function of the classification on a third variable, the third variable is called a moderator variable (Wiggins, 1973).

Hypothesis 3a; Socioeconomic Status

Respondents' level of education and yearly income were combined to form the SES variable. Education and income were converted to z scores then summed for each respondent to serve as an indicator of SES level. The z score for a twelfth grade or high school education was added to the z score for an income of \$6,500 in order to develop a cutoff for developing high and low SES groups. Respondents whose SES level was lower than this cutoff were placed in the low SES group and those whose SES level was equal to or higher than the cutoff were placed in the high SES group. There were 91 or 27% of the sample in the low SES group and 244 or 73% of the sample in the high SES group. Then the perceived likelihood of positive and negative social impact scores were compared for the two groups using separate one-way analyses of variance. A significant difference was found ($F(1,333) = 15.55, p < .001$) between the high and low SES groups on the likelihood of positive impact scores (see Table 14). The mean likelihood score for the high SES group was 51.70 compared to a mean value of 43.22 for the low SES group (see Table 6, page 82). No significant difference was found in the variance of the likelihood of positive impact scores between the high and low groups when tested by Cochran's test for homogeneity of variance. This finding shows that respondents in the high SES group anticipated a significantly greater likelihood of more positive impacts resulting from EXPO than did the low SES group. No significant difference was found between the high and low SES groups on the likelihood of negative impacts (see Table 15). Means and standard deviations for the two SES groups on this dependent variable are shown in Table 6.

Table 14

Summary of Analysis of Variance of the Perceived Likelihood of
Positive Social Impacts of High Versus Low
SES Groups

Source	d.f.	Sum of Squares	Mean Squares	F Ratio	p Value
Between Groups	1	4,767.42	4,767.42	15.55	< .001
Within Groups	333	102,073.57	306.53		
Total	334	106,840.99			

Table 15

Summary of Analysis of Variance of the Perceived Likelihood of
Negative Social Impacts of High Versus Low
SES Groups

Source	d.f.	Sum of Squares	Mean Squares	<u>F</u> Ratio	<u>p</u> Value
Between Groups	1	123.28	123.28	.75	> .05
Within Groups	333	54,913.57	164.91		
Total	334	55,036.85			

Hypothesis 3b; Residence Owned Versus Rented

Respondents who reported that they owned or were buying their present residence were compared to those who reported renting their home on the perceived likelihood of both positive and negative social impacts. One hundred and eight of those interviewed rented their homes and 227 owned or were buying their homes. In order to detect a significant difference between these two groups on the dependent variables, separate one-way analyses of variance were performed. These analyses found no significant differences between renters and owners concerning their beliefs about potential positive and negative impacts of EXPO (see Tables 16 and 17). Means and standard deviations for the two groups are shown in Table 6 (page 82).

Hypothesis 4; Elderly

Respondents who reported their age to be 60 or older were compared to those interviewed who were less than 60 on the perceived likelihood of both positive and negative social impacts of EXPO 82. There were 78 or 23% of the sample 60 or older and 257 or 77% younger than 60. One-way analyses of variance were performed to find if significant differences existed between the two groups on the dependent variables. These separate analyses found no significant differences between the elderly and the non-elderly on either the likelihood scores of positive or negative impacts (see Tables 18 and 19). Means and standard deviations for both groups are shown in Table 6.

Hypothesis 5a; Quality of Life

The level of avowed quality of life was obtained for each respondent by adding their response from the three "ladder of life" satisfaction

Table 16

Summary of Analysis of Variance of the Perceived Likelihood of
Positive Social Impacts of Owners Versus Renters

Source	d.f.	Sum of Squares	Mean Squares	<u>F</u> Ratio	<u>p</u> Value
Between Groups	1	1,148.21	1,148.21	3.62	> .05
Within Groups	333	105,692.66	317.39		
Total	334	106,840.87			

Table 17

Summary of Analysis of Variance of the Perceived Likelihood of
Negative Social Impacts of Owners Versus Renters

Source	d.f.	Sum of Squares	Mean Squares	<u>F</u> Ratio	<u>p</u> Value
Between Groups	1	3.92	3.92	.024	> .05
Within Groups	333	55,033.02	165.26		
Total	334	55,036.94			

Table 18

Summary of Analysis of Variance of the Perceived Likelihood of
Positive Social Impacts of Elderly* Versus Nonelderly

Source	d.f.	Sum of Squares	Mean Squares	<u>F</u> Ratio	<u>p</u> Value
Between Groups	1	1,138.19	1,138.19	3.586	> .05
Within Groups	333	105,701.85	317.42		
Total	334	106,840.04			

*60 or older

Table 19

Summary of Analysis of Variance of the Perceived Likelihood of
Negative Social Impacts of Elderly* Versus Nonelderly

Source	d.f.	Sum of Squares	Mean Squares	<u>F</u> Ratio	<u>p</u> Value
Between Groups	1	531.43	531.43	3.247	> .05
Within Groups	333	54,505.41	163.68		
Total	334	55,036.84			

*60 or older

items developed by Cantril (1965). The response to the "delightful-terrible" life satisfaction item (Andrews & Whitley, 1976) was transformed to the same scale as the Cantril items and also added for each respondent to form a composite score on avowed quality of life (Section I, 7, 8; Appendix C). Groups of high and low avowed quality of life were developed by dividing the composite quality of life scores at the median. There were 170 or 51% of the respondents in the high quality of life and 165 or 49% of the sample in the low group. One-way analyses of variance were then performed to detect significant differences between negative social impact scores. A significant difference was found ($F(1,333) = 7.35, p < .01$) between the high and low quality of life groups on the likelihood of positive impact scores (see Table 20). The mean likelihood score for the high quality of life group was 51.98 while the mean of the low quality of life group was 46.73 (see Table 6, page 82). No significant difference was found between the variances in the likelihood scores between the high and low groups when tested by Cochran's test for the homogeneity of variance. This finding shows that respondents who reported a high quality of life perceived a significantly greater likelihood of more positive impacts resulting from EXPO when compared to those who reported a lower quality of life. No significant difference was found between the high and low quality of life groups on the likelihood of negative impacts (see Table 21). Means and standard deviations for these two groups are given in Table 6.

Table 20

Summary of Analysis of Variance of the Perceived Likelihood of
Positive Social Impacts of High Versus Low
Quality of Life Groups

Source	d.f.	Sum of Squares	Mean Squares	<u>F</u> Ratio	<u>p</u> Value
Between Groups	1	2,307.03	2,307.03	7.35	< .01
Within Groups	333	104,534.64	312.92		
Total	334	106,841.63			

Table 21

Summary of Analysis of Variance of the Perceived Likelihood of
Negative Social Impacts of High Versus Low
Quality of Life Groups

Source	d.f.	Sum of Squares	Mean Squares	<u>F</u> Ratio	<u>p</u> Value
Between Groups	1	17.10	17.10	.103	> .05
Within Groups	333	55,019.73	165.22		
Total	334	55,036.82			

Hypothesis 5b; Quality of Life as a Moderator Variable

In order to determine if avowed quality of life served as a moderator variable between the perceived likelihood of social impacts and attitudes toward EXPO, the sample was again divided as described above into high and low quality of life groups. Cochran's test for the homogeneity of variance found no significant differences in the variances of the perceived likelihood scores and attitudes toward EXPO between the high and low groups. Pearson product-moment correlation coefficients were computed for the high and low groups between the beliefs about impacts and attitudes toward EXPO. These correlation coefficients were then compared by transforming each to a Fisher's z value and using a Z statistic (Guilford & Fruchter, 1973) to test for significant differences. The correlation between the perceived likelihood of social impacts and attitudes toward EXPO was .47 for the low quality of life group. The high quality of life group had a correlation coefficient of .66. When compared using a Z statistic, the correlation coefficient for the high quality of group was found to be significantly greater than for the low quality of life group ($Z = 2.57$, $p < .005$). This finding shows that respondents' beliefs about potential impacts of EXPO were more consistent with their attitudes toward EXPO in the high quality of life group than in the low group.

Path Analysis Model of the Effects of Alienation on
Perceived Social Impacts, Attitudes, and Political
Activity Related to EXPO 82^{2,3}

Regression equations were developed according to the hypothesized model discussed above (see Figure 1, page 51). The resulting beta coefficients obtained from these regression analyses were used as path coefficients (Duncan, 1975). Independent variables that did not have significant path coefficients ($p < .01$) were dropped from the regression equations. Regression equations were then recomputed using only independent variables found to have significant coefficients, to obtain the final path coefficients. Figure 2 presents a diagram of all significant paths in the hypothesized model.

In order to arrive at a single indicator of the perceived likelihood of positive versus negative impacts resulting from EXPO for the hypothesized model, the sum of the negative impact scores was subtracted from the sum of the positive impact scores for each respondent. This single indicator of the perceived likelihood of positive minus negative social impacts ranged from -65 to 63, with a mean of $-.14$, median of -1.11 , and a standard deviation of 25.56.

The results of the path analysis are presented below in the following manner. First the effects of the SES variables on the general and EXPO

²The term alienation or alienation variables was used in this section as a convenient label for the variables general political efficacy, EXPO political efficacy, importance of information sources, and knowledge of EXPO. As was discussed above, these are not direct or strong measures of alienation but found to be indicators of alienation in previous research.

³The terms effect or cause are commonly used to describe the results of a path analysis concerning the relationships in the specific path model specified. These terms refer to correlation or regression coefficients and are not to be confused with their more common usage in inferential statistics.

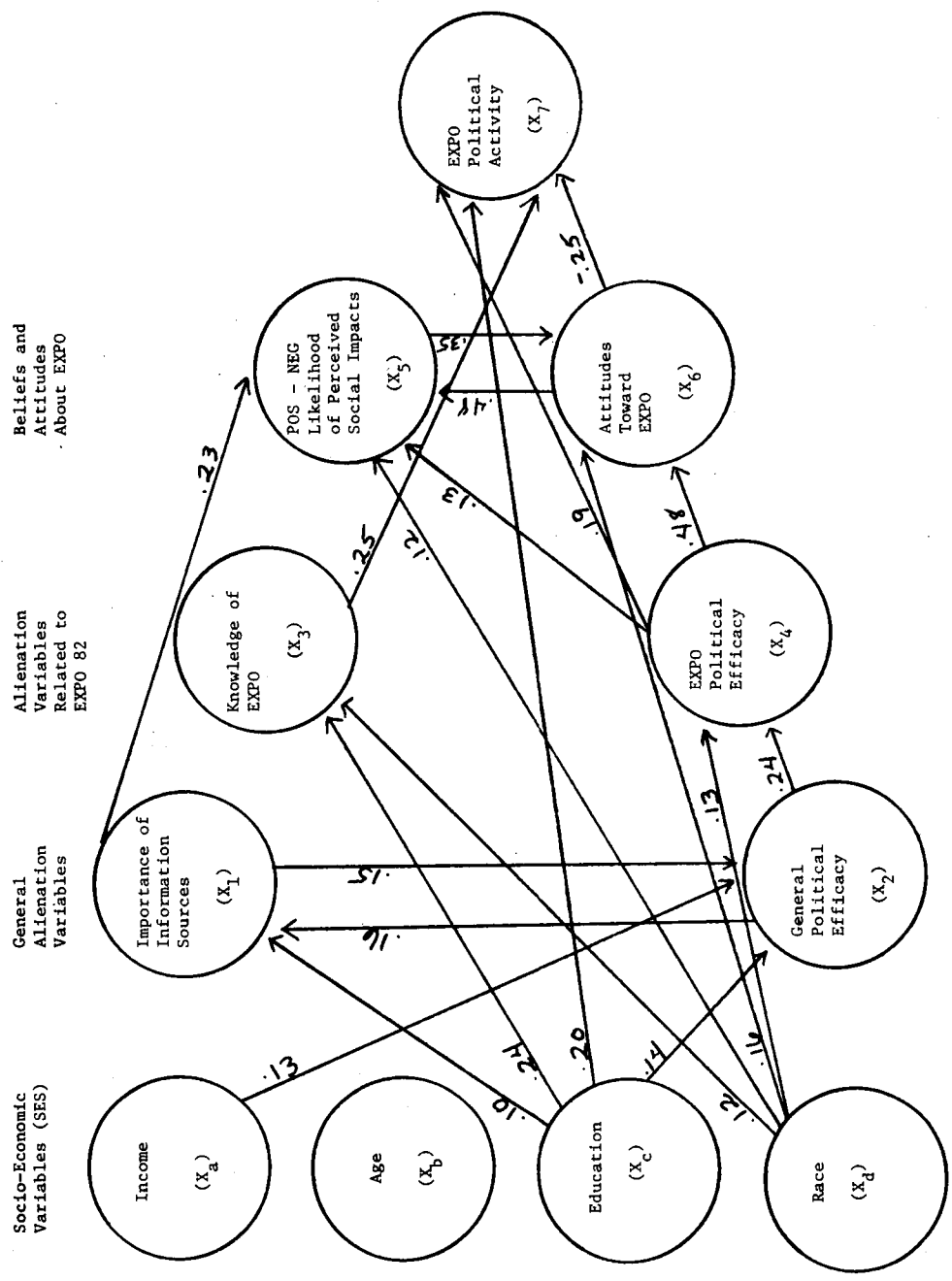


Figure 2. Hypothesized model showing significant paths between SES, general and specific alienation, and the perceived social impacts, attitudes, and political activity related to EXPO 82.

specific alienation variables, and the effects of the SES and general alienation variables on the EXPO specific alienation variables are presented (see Figures 3 and 4). By first presenting the independent variables and their interrelationships, the task of describing the effect of the dependent variables (X_5 , X_6 , X_7) will be made easier. Second, the direct and total effects of the independent variables on the perceived likelihood of positive minus negative social impacts, attitudes toward EXPO, and EXPO political activity (X_5 , X_6 , X_7) are presented. Direct effect is defined as the effect of an independent variable on a dependent variable which is not transmitted via intervening variables, or when all the other independent variables in the model are controlled for in the model (Alwin & Hauser, 1975). Indirect effects are those effects on an independent variable of a dependent variable which are mediated by intervening variables in the model. The total effect is simply the sum of the direct and indirect effects of an independent variable on a dependent variable and represents the amount of change in the dependent variable caused by a given change in the independent variable (Alwin & Hauser, 1975). Finally, the additive effects of the SES, general and specific alienation variables on the three dependent variables are presented, followed by a description of the relative importance of all the variables included in the final model.

Interrelationship between SES and Alienation Variables

Figure 3 presents a diagram of all path coefficients of the SES and alienation variables in the model. Table 22 presents a correlation matrix for all the variables in the model. The correlations between the exogenous SES variables, the general alienation variables, and the

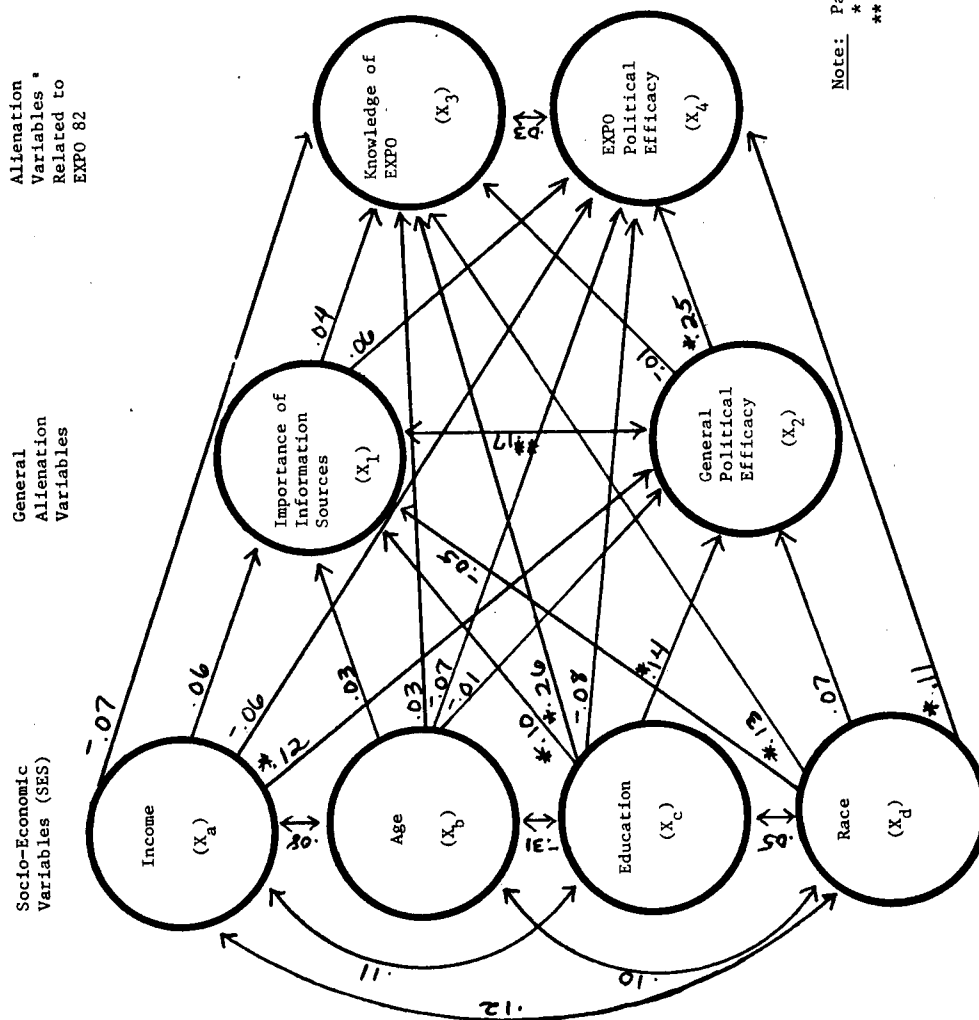


Figure 3. All path coefficients and intercorrelations for the independent variables in the hypothesized model.

Table 22
Correlation Matrix of All Variables in the Hypothesized Model

	X_6	X_c	X_b	X_a	X_d	X_2	X_3	X_4	X_7	X_5	X_1	X_p	X_n
X_6	1.000												
X_c	.101	1.000											
X_b	-.149	-.313	1.000										
X_a	-.083	.114	.083	1.000									
X_d	.205	.047	.103	.116	1.000								
X_2	.180	.174	-.037	.159	.087	1.000							
X_3	.074	.246	-.041	-.019	.128	.049	1.000						
X_4	.665	-.006	-.070	-.041	.104	.233	.034	1.000					
X_7	-.085	.237	-.010	.064	.110	.024	.288	.028	1.000				
X_5	.578	.158	-.058	.140	.008	.187	.126	.463	.026	1.000			
X_1	.102	.107	.001	.090	-.020	.173	.062	.094	.070	.298	1.000		
X_p	.515	.154	-.060	.043	.031	.212	.140	.457	.095	.889	.320	1.000	
X_n	-.445	-.103	.034	.032	.024	-.082	-.059	-.295	.079	-.773	-.153	-.397	1.000

*The sum of the likelihood scores of positive impacts (X_p) and the sum of the likelihood scores of negative impacts (X_n) are also included.

X_a = income

X_b = age

X_c = education

X_d = race

X_1 = importance of information sources

X_2 = general political efficacy

X_3 = knowledge of EXPO

X_4 = EXPO political efficacy

X_5 = positive minus negative social impacts

X_6 = attitudes toward EXPO

X_7 = EXPO political activity

specific alienation variables are also represented by the curve double-headed vectors in Figure 3. Considering the large number of variables and paths in the model, the effects of these independent variables on each other will be presented first. Figure 4 presents a diagram that includes only paths which are significant ($p < .01$).

The results in Figure 4 show that age was not significantly related to any of the alienation variables. Income was found to have a significant path only to general political efficacy. The path from income to general political efficacy was positive, an indication that as incomes increased so did feelings of general political efficacy. Education had a significant effect on general political efficacy, importance of information sources, and knowledge of EXPO. The positive paths from education to all three of these variables indicate that as the level of education of the respondents increased, so did their ratings of the importance of information sources, their feelings of general political efficacy, and their level of knowledge concerning EXPO. Race had significant paths to both the alienation variables related to EXPO specifically, but to neither of the general alienation variables. The positive paths to EXPO political efficacy and knowledge of EXPO suggest that Whites tended to have more knowledge of EXPO specifics and higher feelings of EXPO political efficacy than did Blacks.

As shown in Figure 3, importance of information sources and general political efficacy were correlated at .17. When importance of information was allowed to regress upon general political efficacy and the SES variables, it was found that education and general political efficacy had significant paths to importance of information sources (see Figure 4). This positive path from general political efficacy indicated that

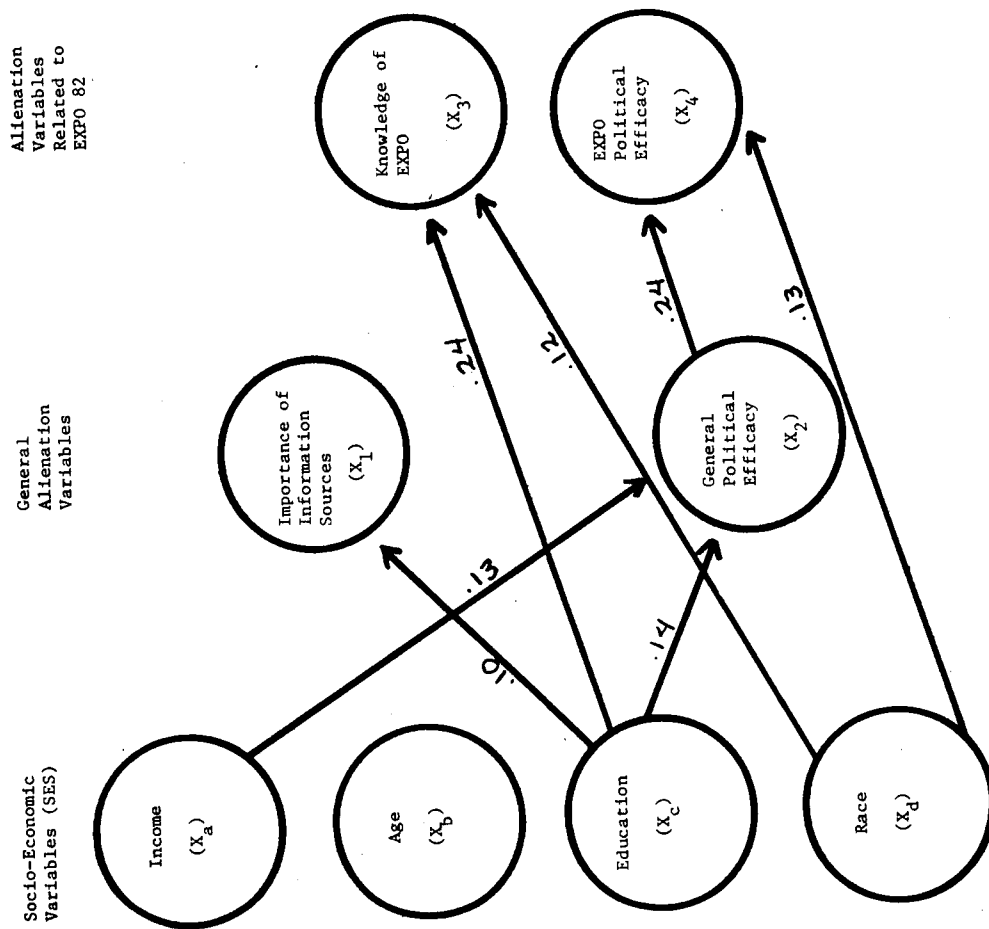


Figure 4. Significant path coefficients between SES, general, and specific alienation variables.

respondents who reported higher feelings of political efficacy tended to rate information sources as more important. A reciprocal relationship existed between these two variables as respondents who rated information sources highly also reported higher feelings of general political efficacy (see Figure 4). As mentioned above, income and education also showed significant paths to general political efficacy. Also, general political efficacy was seen as having a significant positive effect on EXPO political efficacy.

When EXPO political efficacy was allowed to regress on the SES variables, both measures of general alienation, and knowledge of EXPO, only general political efficacy and race had significant paths to EXPO political efficacy. Respondents with higher feelings of general political efficacy were also found to have higher feelings of EXPO political efficacy. The relationship between race and EXPO political efficacy was also positive as Whites tended to have higher political efficacy concerning EXPO than did Blacks.

Neither measure of general alienation significantly affected respondents' level of knowledge concerning EXPO, but education and race were both found to have positive significant paths to knowledge of EXPO. More specifically, Whites tended to have a higher level of information concerning EXPO specifics than did Blacks. Also, as level of education increased, so did the level of EXPO related knowledge. EXPO political efficacy and knowledge of EXPO were not significantly related (see Figure 4).

Direct and Total Effects of SES and Alienation Variables
on Positive Minus Negative Perceived Impacts, Attitudes,
and Political Activity Related to EXPO

The interrelationships between the SES and alienation variables were presented above and diagrammatically shown in Figures 3 and 4 (pages 108 and 111). The relationships between these independent variables and the three dependent variables (X_5 , X_6 , X_7) are now presented to complete the description of the initial model as shown in Figure 1 (page 51). First, an examination of the direct and total effects of all the independent variables on their dependent variables is in order. Table 23 shows the direct and total beta coefficients for each independent variable on its respective dependent variable. The direct effect of each independent variable was computed by allowing the dependent variable to regress on all independent variables specified in the model. The beta coefficient of an independent variable was the measure of that variable's direct effect on the dependent variable. This beta coefficient represents the independent variable's effect on the dependent variable after partialing out or holding all other independent variables constant. In order to compute the total effect of an independent variable on a dependent variable, Alwin and Hauser (1975) recommended developing a regression equation that includes the independent variable of interest, any independent variables entered into the model simultaneously, and all antecedent variables in the model. For example, to compute the total effect of EXPO political efficacy on the dependent variable EXPO political activity, the regression equation would contain all variables to the left of EXPO political efficacy (see Figure 2, page 106) and the other specific alienation variable, knowledge of EXPO. The resulting beta coefficient for EXPO political efficacy would be a measure of its total effect.

Table 23

Summary of Direct and Total Effects of SES, General and Specific Alienation
on the Perceived Social Impacts, Attitudes and Political
Activity Related to EXPO for the Hypothesized Model

Dependent Variables	Effects	Independent Variables*									
		X _a	X _b	X _c	X _d	X ₁	X ₂	X ₃	X ₄	X ₅ ^a	X ₆ ^b
Positive-Negative Perceived Social Impacts (X ₅)	Direct	.01	.04	.08	.11	.23	.00	.04	.13	---	.48
	Total	.01	-.01	.15	.08	.27	.13	.06	.44	---	.48
Attitudes Toward EXPO (X ₆)	Direct	-.05	-.06	.04	.15	-.06	.02	.02	.48	.36	---
	Total	-.06	-.09	.09	.19	.07	.19	.04	.63	.36	---
EXPO Political Activity (X ₇)	Direct	.03	.04	.21	.04	.04	-.04	.24	.19	.01	-.24
	Total	.02	.06	.25	.09	.05	-.04	.23	.04	.01	-.24

^aBeliefs about Potential Impacts serve as an independent variable for Attitudes Toward EXPO and EXPO Political Activity, as well as being a dependent variable.

^bAttitudes Toward EXPO serve as an independent variable for Beliefs About Potential Impacts and EXPO Political Activity, as well as being a dependent variable.

*X_a = income

X₂ = general political efficacy

X_b = age

X₃ = knowledge of EXPO

X_c = education

X₄ = EXPO political activity

X_d = race

X₅ = likelihood of perceived positive minus negative social impacts

X₁ = importance of information sources

X₆ = attitudes toward EXPO

What this procedure does is hold all variables in the model constant except those variables intervening between the independent and dependent variables of interest. Where there are no intervening variables, the direct and total effects are equal (see Table 23). The indirect effects caused by intervening variables can then be computed by simply subtracting the direct effects from the total effects (Alwin & Houser, 1975).

As shown in Table 14 (page 94), the total and direct effects of income on all three dependent variables (X_5 , X_6 , X_7) in the model are negligible. Following the guidelines of Duncan (1975), that any coefficient less than .10 produces a very small impact on the dependent variable, all direct and total effects of income were found to be unimportant in the model. This result is also clearly shown in Figure 2 (page 106), where income produced no significant paths to any variables except general political efficacy. Age also showed no substantial direct or total effect on any of the three dependent variables in Table 23. This result is substantiated by Figure 2, where age produced no significant paths to any variables in the model.

Level of education was found to have a substantial direct and total effect on EXPO political activity and a total effect on respondents' beliefs concerning positive and negative impacts of EXPO. In all cases, the paths were positive, which means that as level of education increased so did EXPO political activity and the likelihood of more positive than negative potential impacts. Figure 2 shows that education had a significant path leading to EXPO political activity. Further, the direct effects were not much less than the total effects (.21 versus .25), consequently, the strong effect of education on EXPO political activity

cannot be substantially due to the other exogenous or intervening variables. Though education had a fairly strong total effect (.15) on the perceived likelihood of positive minus negative social impacts, the direct effect was found not to be significant (see Figure 2, p. 106). The intervening variable, importance of information sources, appeared to be primarily responsible for the difference in total and direct effect of education. When the intervening variable was added to the regression, the education coefficient dropped from .15 to an insignificant .09. Education level did not have significant effects on attitudes toward EXPO.

The results show that race had substantial direct and total effects on attitudes toward EXPO and a significant direct effect on the perceived likelihood of positive minus negative social impacts related to EXPO. In all cases, the significant paths were positive, meaning that Whites tended to have more positive attitudes toward EXPO and a greater perceived likelihood of more positive than negative impacts when compared to Blacks. Figure 2 (page 106) shows that race had significant paths leading to attitudes toward EXPO and the likelihood of potential impacts. The total effects of race are only slightly stronger on attitudes toward EXPO than the direct effects, meaning that the effect of race cannot be explained by other exogenous or intervening variables (see Table 23). The total effect of race on the likelihood of positive minus negative impacts decreased slightly compared to the direct effect, but not enough to drop it below the .10 guideline suggested by Duncan (1975). When the direct effect is larger than the total effect, this is evidence of a negative indirect effect. As mentioned earlier, the direct and indirect effects

of a variable are summed to arrive at total effects, so one or more of the intervening variables are responsible for this small decrease in the total effects of race on the beliefs concerning the likelihood of potential impacts.

The importance of information sources was found to have strong direct and total effects on respondents' beliefs concerning the likelihood of positive minus negative social impacts of EXPO 82. This independent variable did not have a significant effect on the other two dependent variables, attitudes toward EXPO, or EXPO political activity (see Table 23). Figure 2 (page 106) shows a significant and positive path from the importance of information sources to respondents' beliefs concerning potential positive minus negative impacts of EXPO. This finding indicates that as respondents' ratings of importance of information sources increased, so did their anticipation of more positive than negative potential impacts. This total effect is only slightly larger than the direct effect for this independent variable; consequently, the effects of importance of information sources cannot be explained by other antecedent or intervening variables.

Figure 2 shows that general political efficacy has no significant paths to any of the three dependent variables presently being discussed (X_5 , X_6 , X_7). Table 23 verifies this result showing no direct effects of general political efficacy over .10. But it was found that general political efficacy had total effects over .10 for both attitudes toward EXPO and beliefs about potential impacts of EXPO. The intervening variable most responsible for the reduction of the direct effect of general political efficacy was EXPO political efficacy. When EXPO

political efficacy was added to the regression equation that contained the SES and general alienation variables, the direct effect of general political efficacy dropped from .19 to .02 for beliefs about EXPO impacts and from .13 to .02 for attitudes toward EXPO. Further, EXPO political efficacy shows significant paths to both of these dependent variables (see Figure 2, page 106). This finding shows that the indirect effects of general political efficacy were important determinants of respondents' beliefs and attitudes concerning EXPO.

Knowledge of EXPO specifics did not have a substantial direct or total effect on attitudes toward EXPO or beliefs concerning positive minus negative social impacts of EXPO (see Table 23). But knowledge of EXPO was found to have strong direct and total effects on respondents' reported level of EXPO political activity. The results indicate that as the level of knowledge concerning EXPO specifics increased, so did their EXPO related political activity. The direct and total effects are almost equal, ruling out the possibility of other antecedent or intervening variables accounting for this effect.

EXPO political efficacy was found to have strong effects on all three dependent variables presently being discussed (see Table 23, page 113). Figure 2 (page 106) shows that EXPO political efficacy produced significant paths to attitudes toward EXPO, EXPO political activity, and the likelihood of positive minus negative social impacts due to EXPO. All coefficients were positive, which indicates that as feelings of EXPO political efficacy increased, so did attitudes toward EXPO, EXPO political activity, and respondents' anticipations, of more positive than negative impacts. The total effects of EXPO political

activity were found to be much greater than the direct effects (.44 versus .13) on respondents' beliefs concerning potential social impacts of EXPO. The discrepancy between the total and direct effect of EXPO political efficacy was primarily accounted for by the intervening effects of attitudes toward EXPO. When attitudes toward EXPO were entered into the regression equation, the beta coefficient of EXPO political efficacy dropped from .44 to .13. The reciprocal effect was also found. The total effect of EXPO political efficacy dropped from .63 to .48 on attitudes toward EXPO, due to the intervening effect of respondents' beliefs concerning potential impacts of EXPO. The direct effect of EXPO political efficacy on EXPO political activity was found to be much stronger than its total effect (.19 versus .04). This finding indicated that the indirect effects of EXPO political efficacy must be negative. In the present case, this negative indirect effect was produced primarily by the intervening variable, attitudes toward EXPO, which caused less EXPO political activity. In other words, EXPO political efficacy had a strong positive effect on attitudes toward EXPO which, in turn, had a strong negative effect on EXPO political activity, which caused a reduction in the total effect of EXPO political efficacy on EXPO political activity.

Respondents' beliefs about the likelihood of positive versus negative social impacts resulting from EXPO 82 were found to have a significant positive effect on respondents' attitudes toward EXPO. As beliefs about more positive and less negative impacts increased, respondents' attitudes toward EXPO became more positive. Respondents' beliefs about the relative

social impacts of EXPO did not have a significant effect on EXPO political activity.

Attitudes toward EXPO were found to have significant paths to both EXPO political activity and respondents' beliefs about the likelihood of positive minus negative social impacts of EXPO. As attitudes toward EXPO became more positive, respondents' beliefs about more positive and less negative impacts also increased. But a negative relationship was found between attitudes toward EXPO and EXPO political activity. As attitudes became more negative, more political activity was reported by respondents.

Additive effects of SES and the alienation variables. Before summarizing the results of the final path model, it is instructive to examine the amount of variance (R^2) that each independent variable accounted for in the dependent variable and how much of the variance the whole model accounted for in each dependent variable. Table 24 shows the amount of variance accounted for by the SES variables and then for each variable added into the model. The last column shows the total amount of variance that the model accounted for in each dependent variable.

The first column of Table 24 presents the R^2 value for the regression of each dependent variable on the four exogenous SES variables. About 3% of the variance in respondents' beliefs concerning the positive minus negative social impacts of EXPO was accounted for by the SES variables, primarily by education and race (see Table 23, page 114). The SES variable accounted for about 3% of the variance in attitudes

Table 24

Amount of Variance Accounted for (R^2) with the Addition of Each Independent Variable

Dependent Variables	Independent Variables in the Equation [†]						
	$X_a X_b X_c X_d$	$X_a - X_d + X_1$	$X_a - X_1 + X_2$	$X_a - X_2 + X_3$	$X_a - X_3 + X_4$	$X_a - X_4 + X_5$	$X_a - X_5 + X_6$
Positive-Negative Perceived Social Impacts (X_5)	.025	.082***	.082	.084	.092	.092	.426***
Attitudes Toward EXPO (X_6)	.033	.036	.036	.037	.480***	.573***	.573
EXPO Political Activity (X_7)	.033	.034	.035	.118***	.137**	.137	.154**

[†] X_a = income X_b = age X_c = education X_d = race X_1 = importance of information sources X_2 = general political efficacy X_3 = knowledge of EXPO X_4 = EXPO political efficacy X_5 = positive minus negative perceived impacts X_6 = attitudes toward EXPO** $\underline{p} < .01$ *** $\underline{p} < .001$

toward EXPO and for 3% of the variance in EXPO political activity. Race was seen as the most influential single SES variable for attitudes toward EXPO, while education was most important to EXPO political activity (see Table 23, page 114).

The second column of Table 24 shows the R^2 value for the SES variables plus the importance of information sources in the regression equations of the dependent variables. The increase in R^2 values for attitudes toward EXPO and EXPO political activity were not significant when importance of information sources was included in the model. But this independent variable produced a significant increase ($F(1,333 = 24.9, p < .01)$) in the R^2 value for respondents' beliefs about potential positive minus negative impacts resulting from EXPO. Importance of information sources accounted for about 6% of the variance in respondents' beliefs about potential impacts.

Column three represents the cumulative R^2 value after general political efficacy is entered into the model. General political efficacy produced no significant change in the R^2 value for EXPO political activity, attitudes toward EXPO, or beliefs about potential positive minus negative impacts of EXPO.

The fourth column presents the R^2 value after knowledge of EXPO was entered into the regression equations of the dependent variables. Table 24 shows that knowledge of EXPO produced nonsignificant increases in the R^2 values for attitudes toward EXPO and beliefs about positive minus negative impacts of EXPO. The inclusion of knowledge of EXPO produced a significant increase of about 8% in the variance accounted for when EXPO political activity was the dependent variable ($F(1,327) = 18.34, p < .001$).

Column five of Table 24 shows the R^2 value after the inclusion of EXPO political efficacy into the model. This independent variable did not cause a significant change in the variance explained in the perceived likelihood of positive minus negative impacts, but did produce significant increases in the R^2 values for the other two dependent variables. An additional 2% of the variance was accounted for by EXPO political efficacy in respondents' reported EXPO political activity ($F(1,326) = 6.54, p < .01$). The amount of variance explained increased 44% when EXPO political efficacy was included in the regression equation for attitudes toward EXPO ($F(1,326) = 206.26, p < .001$).

When the likelihood of positive minus negative impacts of EXPO was included as an independent variable in the regression equations of the other two dependent variables, the R^2 value increased significantly for attitudes toward EXPO ($F(1,325) = 61.06, p < .001$), but did not change significantly for EXPO political activity (Column 6, Table 24). An additional 9% of the variance was accounted for in respondents' attitudes toward EXPO by their beliefs concerning potential social impacts of EXPO.

When attitude toward EXPO was included as an independent variable in the regression equations of the other two dependent variables, both R^2 values increased significantly (Column 7, Table 24). Respondents' attitudes toward EXPO produced an increase of 33% in the amount of variance explained for beliefs about potential positive minus negative impacts of EXPO ($F(1,325) = 61.40, p < .001$). An additional 2% of variance was accounted for in respondents' reported EXPO political activity by their attitudes toward EXPO ($F(1,324) = 6.53, p < .01$).

The last column of Table 24 also shows the total amount of variance accounted for by the complete model for each dependent variable. The R^2 value of .15 for EXPO political activity means that 15% of the variance in this dependent variable was accounted for with the present model. The hypothesized model accounted for a much larger portion of the variance of respondents' beliefs concerning the likelihood of positive minus negative social impacts. The R^2 value for this dependent variable was .42, meaning that 43% of the variance in respondents' beliefs about impacts resulting from EXPO was explained by the model. The R^2 value for attitudes toward EXPO was even larger (.57). The model accounted for 57% of the variance in respondents' attitudes toward EXPO 82.

Final path model. Figure 2 (page 106) shows the hypothesized model, but includes only significant paths ($p < .01$). As mentioned above, the initial set of regression equations allowed every dependent variable to regress on every preceding and contemporary independent variable (see Tables 25, 26, 27). For example, the regression equation for EXPO political activity included every other variable in the model as independent variables. Independent variables that did not have significant path coefficients ($p < .01$) were dropped from the regression equations. Regression equations were then recomputed using only independent variables found to have significant coefficients to obtain the final path model shown in Figure 2 (see Tables 28, 29, 30).

It was found that level of education, knowledge of EXPO, EXPO political efficacy, and attitudes toward EXPO all had significant paths leading to EXPO political activity. The direct and total effects of

Table 25

Summary of Results of Stepwise Multiple Regression Analysis
for the Perceived Likelihood of Positive Minus
Negative Social Impacts of EXPO

Variables	<u>R</u>	<u>R</u> ²	<u>R</u> ² Change	<u>r</u>	Beta
Attitudes Toward EXPO	.578	.334	.334*	.578	.484*
Importance of Information Sources	.626	.391	.057*	.298	.225*
Race	.639	.408	.016*	.008	.112*
EXPO Political Efficacy	.646	.417	.008	.463	.133*
Education	.650	.423	.006	.158	.080
Knowledge of EXPO	.652	.424	.001	.126	.039
Age	.653	.425	.001	-.058	.036
Income	.653	.426	.000	.014	.014

* $p < .01$

Table 26

Summary of Results of Stepwise Multiple Regression
Analysis for Attitudes Toward EXPO

Variables	<u>R</u>	<u>R</u> ²	<u>R</u> ² Change	<u>r</u>	Beta
EXPO Political Efficacy	.665	.442	.442*	.665	.475*
Positive Minus Negative Impacts	.731	.535	.092*	.578	.360*
Race	.748	.559	.024*	.205	.154*
Age	.752	.565	.006	-.149	-.060
Importance of Information Sources	.754	.568	.002	.102	-.058
Income	.755	.570	.001	-.083	-.047
Education	.756	.572	.001	.101	.038
General Political Efficacy	.756	.572	.000	.180	.023
Knowledge of EXPO	.757	.573	.000	.074	.022

* $p < .01$

Table 27

Summary of Results of Stepwise Multiple Regression
Analysis for EXPO Political Activity

Variables	<u>R</u>	<u>R</u> ²	<u>R</u> ² Change	<u>r</u>	Beta
Knowledge of EXPO	.288	.830	.083*	.288	.243*
Education	.335	.112	.029*	.237	.210*
Attitudes Toward EXPO	.357	.127	.015*	-.085	-.236*
EXPO Political Efficacy	.383	.147	.019*	.028	.187*
Age	.385	.148	.001	-.010	.036
Importance of Information Sources	.387	.150	.001	.070	.041
Race	.389	.151	.001	.110	.037
General Political Efficacy	.390	.152	.001	.024	-.040
Income	.391	.153	.007	.064	.028
Positive Minus Negative Impacts	.391	.154	.000	.026	.008

*p < .01

Table 28

Summary of Results of Stepwise Multiple Regression Analysis
for the Perceived Likelihood of Positive Minus Negative
Social Impacts of EXPO with Significant Variables

Variables	<u>R</u>	<u>R</u> ²	<u>R</u> ² Change	<u>r</u>	Beta
Attitudes Toward EXPO	.578	.334	.334*	.578	.482*
Importance of Information Sources	.625	.391	.057*	.298	.230*
Race	.639	.408	.016*	.008	.122*
EXPO Political Efficacy	.645	.417	.008	.463	.134*

* $p < .01$

Table 29

Summary of Results of Stepwise Multiple Regression
 Analysis for Attitudes Toward EXPO
 with Significant Variables

Variables	<u>R</u>	<u>R</u> ²	<u>R</u> ² Change	<u>r</u>	Beta
EXPO Political Efficacy	.665	.442	.442*	.665	.484*
Positive Minus Negative Impacts	.731	.535	.092*	.578	.354*
Race	.748	.559	.024*	.205	.157*

* $p < .01$

Table 30

Summary of Results of Stepwise Multiple Regression
 Analysis for EXPO Political Activity
 with Significant Variables

Variables	<u>R</u>	<u>R</u> ²	<u>R</u> ² Change	<u>r</u>	Beta
Knowledge of EXPO	.288	.083	.083*	.288	.250*
Education	.335	.112	.029*	.237	.202*
Attitudes Toward EXPO	.357	.127	.015*	-.085	-.249*
EXPO Political Efficacy	.383	.147	.019*	.028	.186*

these and all other independent variables were presented above. The total amount of variance accounted for in respondents' EXPO related political activity was 15%.

The results show that race, EXPO political efficacy, and respondents' beliefs about the likelihood of positive minus negative social impacts of EXPO had significant paths to attitudes toward EXPO. The model accounted for 57% of the variance in these attitudes. The direct and total effects of these and all other independent variables was presented above.

Finally, Figure 2 (page 106) shows that race, importance of information sources, EXPO political efficacy, and attitudes toward EXPO had significant paths to the primary dependent variable of the present study—respondents' beliefs concerning the likelihood of positive minus negative social impacts resulting from EXPO. The direct and total effects of all the independent variables in relation to this dependent variable were presented above. The model accounts for 43% of the variance in respondents' beliefs concerning the positive and negative impacts of EXPO.

CHAPTER IV

DISCUSSION

A discussion of the results of the path analysis concerning the perceived likelihood of social impacts are presented initially. Where appropriate, the specific hypotheses examined by bivariate analysis are included in the discussion of the multivariate model. The results of the multivariate analysis of attitude toward EXPO and EXPO political activity are also discussed.

Final Path Model

Perceived Likelihood of Positive Minus Negative Social Impacts

The purpose of using path analysis was to examine the usefulness of a theoretical model dominated by alienation theory and the perspective of community psychology for the study of differential social impacts of EXPO. The multivariate model was also extended to the study of attitudes toward EXPO and EXPO-related political activity.

The primary dependent variable of the present study, the perceived likelihood of positive minus negative social impacts resulting from EXPO, was postulated as an indicator of total social impacts. This dependent variable regressed significantly on attitudes toward EXPO, EXPO political efficacy, importance of information sources, and race (see Figure 2, page 106). Though general political efficacy and education did not have

a significant direct effect, they were both found to have total effects over .10 (see Table 23, page 114).

Three out of four of the alienation-related variables in the model were found to have either significant direct or total effects on the social impact variable. As respondents' perceptions of their personal political power decreased, so did the likelihood of more positive and less negative social impacts. This finding is consistent with the theoretical model presented above, where individuals who were alienated as measured by powerlessness would anticipate fewer positive and more negative outcomes resulting from a large-scale project like EXPO. The effect of EXPO-specific political efficacy was a particularly strong determinant of respondents' beliefs about social impacts. This finding was also consistent with the theoretical perspective of community psychology. Rappaport (1977) argued that a lack of personal and political power often experienced by disadvantaged groups prevents them from obtaining resources and makes them more susceptible to pestilent circumstances of society. Schnaiberg and Meidinger (1978), writing specifically about differential social impacts, contended that those individuals and groups who have experienced a lack of "economic and ecological" resources because of a lack of power would also be differentially impacted on by a large-scale project.

The results of the analysis of hypothesis 1a further substantiated the findings of the multivariate analysis. Additional information was obtained by this analysis of political efficacy because respondents in the high and low political efficacy groups were examined for significant

differences on positive or negative social impacts separately.

Respondents in the low EXPO political efficacy group anticipated a significantly greater likelihood of more negative impacts as well as a lesser likelihood of positive impacts than did the high EXPO political efficacy group. The results of further analysis showed that respondents who reported a low level of political efficacy in general also anticipated a significantly greater likelihood of more negative impacts as well as a lesser likelihood of positive impacts than did the high general political efficacy group. Those respondents who believed they had little personal control over political issues and events were found in the bivariate analysis to anticipate fewer benefits and more adverse consequences from EXPO 82. This analysis ruled out the possibility that just negative impacts or just positive impacts were responsible for the significant findings concerning political efficacy in the multivariate model. The results concerning general political efficacy found in the examination of hypothesis 2a also complement the finding that general political efficacy had a total effect in the multivariate analysis. In the path model, the direct effect of general political efficacy was decreased by the intervening variable, EXPO political efficacy. But the significant total effect, coupled with the significant findings of the bivariate analysis, shows that general political efficacy was an important determinant of respondents' beliefs about potential social impacts of EXPO.

The results of the analysis of differential social impacts of EXPO in regard to political efficacy can be further understood by examining

the discrepancies between respondents' preferences concerning the resolution of EXPO-related issues and their expected outcomes of those issues. At the time of the survey, the referendum issue, as well as the controversy over the feasibility of Knoxville as the EXPO site, were not resolved (e.g., Citizen Groups Demand EXPO Referendum, 1979; Can EXPO 82 Ever Be a Reality?, 1979). Even so, an obvious explanation for the lack of EXPO political efficacy was that, generally speaking, respondents did not want Knoxville to host EXPO, but a great majority believed that Knoxville would be the site anyway. It was also clear that most respondents wanted a voice in determining EXPO-related issues through referendums, but only about 15% believed such an opportunity would occur. The results of the survey also found that this level of political efficacy related to EXPO was much lower than the level of political efficacy in general. About 54% of the respondents believed they had personal influence in the city government's decision-making process, compared to only 13% who believed they had a similar influence in EXPO-related matters. It appeared that respondents believed they had very little to say about issues surrounding EXPO, or whether EXPO should even be held in the community. Further, this lack of political efficacy seemed to be an important determinant of their beliefs about the social impacts of EXPO.

These results were consistent with the findings of Seeman (1972b) that alienation as measured by political efficacy specific to a situation differed from, but was correlated with, general political efficacy. Napier (1972) also found the individuals who were forced to move by the

implementation of a large-scale project were no more alienated in general, but were more alienated from the specific project and the agency responsible for the project as measured by powerlessness. The conclusions drawn from the present study are that respondents were more alienated from EXPO specifically because of their perceived lack of control over its outcomes. It was also found that general political efficacy was significantly related to EXPO political efficacy, which also served as an intervening variable through which general political efficacy had significant total effects on respondents' beliefs concerning social impacts of EXPO. Consequently, those alienated in general, and specifically from EXPO as measured by powerlessness, believed they would experience more negative and less positive impacts resulting from EXPO.

The general measure of meaninglessness, importance of information sources, was found to have a significant path to the perceived likelihood of positive minus negative social impacts resulting from EXPO (see Figure 2, page 106). This measure was used by McLeod (1965) as an indicator of alienation as related to Seeman's (1959) construct of meaninglessness. McLeod found that individuals who rated mass media sources as unimportant were more alienated than those who considered these sources important for obtaining control-relevant information. This variable was also found to be correlated with general political efficacy, which is consistent with Seeman's (1966, 1967) findings. It was anticipated that respondents' importance ratings would be related to the specific measure of meaninglessness, level of knowledge of EXPO specifics. As shown in Figure 3 (page 107), the path coefficient

between these two variables was not significant. Also, knowledge of EXPO was not significantly related to either measure of political efficacy. These findings were inconsistent with the research of Seeman (1966, 1967), Biderman (1970), and Saenger (1945), who found that the level of political efficacy was correlated with the level of relevant information.

Finally, knowledge of EXPO was the only alienation variable in the model that did not have either a significant direct or total effect on the perceived likelihood of positive minus negative social impacts resulting from EXPO. This finding was substantiated further when hypothesis 2a was examined. No significant differences were found between the high and low knowledge groups concerning their expectations of positive or negative impacts. Lounsbury et al. (1979) also found no differences between respondents' expected outcomes of nuclear power plant construction when divided into high and low knowledge groups. But further examination revealed that level of knowledge had a moderating effect between respondents' attitudes toward the nuclear power plant and beliefs about its potential impacts. This same result was found in the present study. While no significant differences were found between the high and low knowledge groups, knowledge was found to have a moderating effect between respondents' attitudes toward EXPO and beliefs about potential social impacts resulting from EXPO. More specifically, the high knowledge group showed a stronger relationship between attitudes toward EXPO and beliefs about its potential impacts than the low knowledge group.

It appears that attitudes toward EXPO had a greater influence on the high knowledge respondents' beliefs about EXPO-related social impacts and/or these beliefs had a greater influence on their attitudes toward EXPO, when compared to the low knowledge group. As shown in Figure 2 (page 106), a strong reciprocal relationship was found between these two variables for the total sample. This relationship is simply stronger for the high knowledge group, when compared to the low knowledge group.

The same result was found when avowed quality of life was tested for possible moderating effects between attitudes toward EXPO and beliefs about its potential impacts. Attitudes toward EXPO were found to be more highly correlated with the likelihood of potential impacts for the high quality of life group, when compared to the low quality of life group. This finding is consistent with the results of Lounsbury et al. (1979), where attitudes toward a nuclear power plant were significantly more correlated with expected impacts resulting from the plant for the high quality of life group, when compared to the low quality of life group. Where Lounsbury found no significant difference between high and low quality of life groups on the likelihood of expected impacts, the present study found that the high quality of life group anticipated a significantly greater likelihood of positive impacts, when compared to the low group.

One possible explanation for the high quality of life group's anticipation of more positive impacts is that individuals who have reported high avowed life satisfaction tend to be more optimistic concerning future events in their lives (Andrews & Whithey, 1976).

Consequently, those who reported high quality of life in the present study could be more optimistic about EXPO-producing benefits for them and the community. Following this same reasoning it would be expected that the high quality of life group would be less pessimistic about potential negative impacts of EXPO, but this was not found. Why quality of life served as a moderator variable between attitudes toward EXPO and beliefs about potential impacts of EXPO was more difficult to comprehend. Following the logic of Lounsbury et al. (1979) that individuals of high avowed quality of life believe that events in their lives are more predictable (Ziller, 1974), then possibly the respondents in the present study placed more faith in their beliefs about potential impacts in forming their attitudes toward EXPO. If indeed this is a viable explanation, quality of life could also be related to measures of meaninglessness. As Seeman (1959, 1972a) explained, meaninglessness is the inability to adequately predict future events in the environment, often due to a lack of relevant information concerning these future events. Unfortunately, the quality of life indicator was not placed in the hypothesized path model; hence, the degree of relationship between the indicators of meaninglessness and quality of life were not known.

Before commenting on the relevance of these alienation variables and alienation theory in general for the study of differential social impacts resulting from EXPO, a common criticism of research dealing with Seeman's alienation theory should be discussed. A number of researchers have found that SES level was often confounded with dimensions of meaninglessness and powerlessness (Dean, 1960; Erbe, 1964). Lee (1972)

commented that Blacks, the poor, and the uneducated, as well as other disadvantaged groups, seemed to dominate those found alienated in research studies. An examination of the direct and total effects of the exogenous SES variable on the indicator of perceived social impacts in the path model allows a discussion of this criticism in regard to the present study.

The results of the path analysis showed that race had a significant direct effect on respondents' beliefs concerning the positive minus negative impacts of EXPO. Level of education had a significant total effect on this dependent variable but the intervening alienation variables reduced its direct effect below the significant level. Income and age had no effect on respondents' beliefs about potential social impacts. A large indirect effect of a SES variable would indicate that the effects of a SES variable were being masked by one or more intervening variables. As mentioned above, education's direct effect (path coefficient = .08), on respondents' beliefs about potential impacts was lower than the total effect (path coefficient = .15). It appears that all of the alienation variables could have contributed to this decrease. The level of education was found to be significantly related to both measures of meaninglessness and general political efficacy, which in turn had a strong significant path to EXPO political efficacy (see Figure 2, page 106). But the combined intervening effect of the alienation variables is not extreme. The difference between the direct and total effects of race on respondents' beliefs about potential impacts was extremely small. The indirect effects of the SES variables were quite small, especially when compared to the

significant direct and total effects of importance of information sources, and general and EXPO political efficacy (see Table 23, page 113). Consequently, the alienation variables do not appear to be seriously confounded by the SES variables in this case.

Further information concerning the effect of SES level on respondents' beliefs about potential social impacts was found by the examination of hypothesis 3a. It was found the low SES respondents anticipated a significantly smaller likelihood of positive impacts than did the high SES group. There was no difference in the high and low SES groups' expectations concerning negative social impacts. This finding complements the results concerning the effects of race and education on this dependent variable in the multivariate analysis. These results were consistent with the theoretical orientation to differential impacts presented earlier. Many social scientists have presented evidence that Blacks and those of low SES level receive fewer societal benefits (e.g., Bonnen, 1970; Rainwater, 1968; Ryan, 1971). Rappaport (1977), when summarizing this literature for a community psychology perspective, argued that the poor, uneducated, and minorities typically had a more difficult time of obtaining resources. More specifically, many writers in the field of SIA have contended that low SES groups and individuals receive fewer benefits but suffer adverse impacts from large-scale projects (e.g., Daffron, 1975; Friesema & Culhane, 1976; Schnaiberg & Meidinger, 1978). Further, a number of researchers in the field of SIA have found this to be an accurate contention (e.g., Breese et al., 1965; Davenport & Davenport, 1979;

Llewellyn, 1974). The expectations of the respondents in the present study were partially consistent with this previous literature in that the low SES group anticipated fewer positive impacts from EXPO. But at the time of the survey they did not expect significantly more negative impacts.

The related findings that renters' beliefs about potential impacts did not differ from home owners on either positive or negative impacts resulting from EXPO was not consistent with the literature of SIA (hypothesis 3a). One possible explanation for this discrepancy was that a majority of the previous literature concerning impacts on renters versus owners came out of rural boom towns (Breese et al., 1965; Davenport & Davenport, 1979; Gilmore & Duff, 1975). The massive influx of new construction workers into those small communities was judged to be responsible for increased rent prices, hence more adverse impacts on renters. The urban nature of the setting of the present study could prevent extensive rent increases due to a large influx of new workers. First, it is conceivable that an urban setting could supply a large percentage of the work force needed for a large-scale project like EXPO. Second, those new workers who did enter the urban community would not have as large an impact on the availability of rental houses simply due to the much larger housing market. Another SES-related finding was that elderly respondents' perceptions of potential positive and negative impacts of EXPO did not significantly differ from nonelderly respondents (hypothesis 4). This result is not consistent with the literature of differential social impacts on the elderly (Clemente & Summers, 1973; Smith & Hogg, 1971).

The most important determinant of respondents' beliefs about potential social impacts were their attitudes toward EXPO. As reported above, attitudes toward EXPO produced a path coefficient of .48 to beliefs about potential impacts and accounted for over 33% of the variance in this dependent variable (see Table 25, page 125). This result can be related to what Sundstrom et al. (1977) found when examining the relationship between expected impacts of and attitudes toward construction of a nuclear power plant. They found a reciprocal relationship where the likelihood of potential impacts was the best predictor of respondents' attitudes toward the plant. They reported that over 50% of the variance in respondents' attitudes was accounted for by their beliefs about potential impacts.

In the present study, respondents who expressed a favorable attitude toward EXPO anticipated a greater likelihood of positive than negative impacts. As attitudes toward EXPO became more negative, respondents expected more negative than positive impacts. This is a particularly interesting finding for two reasons. First, the major determinant of respondents' attitudes toward EXPO was found to be their level of EXPO political efficacy. The more influence they felt they had, the more favorable they were to EXPO. Also, EXPO political efficacy was found to have a significant direct effect on the likelihood of potential impacts as well as an extremely strong indirect effect through the intervening variable, attitudes toward EXPO. Second, knowledge of EXPO did not significantly affect the likelihood of potential impacts or attitudes toward EXPO. Therefore, it appears respondents' beliefs about potential

positive versus negative impacts were not based on knowledge of the impact-producing project but on whether or not they were favorable toward it and whether or not they perceived having personal influence over the project.

It appears that the hypothesized model, dominated by alienation theory, was useful in understanding the perceived likelihood of positive and negative impacts resulting from EXPO. The model accounted for over 42% of the variance in the dependent variable. Also, three out of four of the alienation variables were found to have significant direct and/or total effects on beliefs about potential impacts. As predicted, when levels of meaninglessness and powerlessness rose, so did respondents' anticipations of more negative and less positive impacts resulting from EXPO. Further, these effects were not overly diluted by the SES variables, a common problem in alienation research. Attitude toward EXPO was the most powerful determinant of respondents' beliefs about potential impacts, but as seen in Table 26 (page 126), EXPO political efficacy accounted for over 44% of the variance in these attitudes. As measures of alienation, the political efficacy and importance of information sources variables contributed to the understanding of potential social impacts.

Attitudes Toward EXPO

As an independent variable, attitude toward EXPO was useful in explaining respondents' beliefs about potential social impacts. It was also seen as an important secondary purpose of this study to enter attitudes toward EXPO into the hypothesized model as a dependent variable.

In this manner, the relationship between attitudes and the likelihood of potential impacts can also be better understood.

Race, EXPO political efficacy, and the perceived likelihood of potential impacts all have significant paths leading to attitudes toward EXPO. That EXPO political efficacy had a strong effect on attitudes toward EXPO is consistent with the past research of Seeman (1972b), who found that increased efficacy to a specific situation was related to more favorable attitudes toward that situation. He also found that general political efficacy correlated with specific political efficacy. In the present study, general political efficacy was significantly related to EXPO political efficacy and had an indirect effect, through EXPO political efficacy, on attitudes toward EXPO. As mentioned earlier, the primary determinant of a more positive attitude toward EXPO was a higher level of perceived influence in EXPO-related matters. EXPO political efficacy accounted for about 44% of the variance in attitudes toward EXPO.

Another important determinant of attitudes toward EXPO was race. It was found that Whites tended to have more favorable attitudes toward EXPO than did Blacks. Race also had significant paths to both EXPO political efficacy and respondents' beliefs about political social impacts. Race's total effects are slightly larger than its direct effects on attitudes toward EXPO, with the two above mentioned variables probably having an intervening effect. Consequently, Blacks in the sample had lower levels of EXPO political efficacy and a greater likelihood of more negative and less positive social impacts. These findings are consistent

with the research on powerlessness that found Blacks to have lower feelings of personal control over important events and, hence, perceived less control over the resources in their environment (Dean, 1960; Erbe, 1974).

The likelihood of potential impacts was also found to have a strong relationship with respondents' attitudes toward EXPO. This result is consistent with the findings of Sundstrom et al. (1977), where the expected outcomes accounted for over 50% of the variance in attitudes toward a nuclear power plant. In the present model, expected impacts only accounted for about 9% of the variance in attitudes toward EXPO. That expected impacts help predict attitudes toward EXPO also complements the previous research on predictability of attitudes from the likelihood of expected outcomes (Fishbein & Ajzen, 1975).

The hypothesized model for the present study appeared to be useful in understanding attitudes toward EXPO. The total model accounted for over 57% of the variance in the attitude measure. The specific measure of alienation as measured by powerlessness, EXPO political efficacy, accounted for 44% of the variance alone. Further, attitude toward EXPO was found to be important in predicting respondents' beliefs about potential social impacts.

EXPO Political Activity

The last secondary dependent variable in the model was EXPO political activity. The dependent variable was entered in the model as dependent on attitude toward EXPO, beliefs about potential positive versus negative social impacts and all antecedent variables in the model. It was found in the final path model that education, knowledge of EXPO, EXPO

political efficacy and attitudes toward EXPO all had significant paths leading to EXPO political activity.

It appeared that a higher level of education, EXPO political efficacy and knowledge of EXPO, coupled with a less favorable attitude toward EXPO, precipitated a higher level of reported EXPO political activity. These findings are generally consistent with alienation theory, with two exceptions. Seeman (1972b) found where knowledge of a specific situation was high and correlated with a high situation-specific efficacy then action would more likely occur. Previous research had found that level of education was important to all three of these dimensions (Seeman, 1966, 1967). Seeman (1972b) also found that a favorable attitude toward the situation was an important feature in eventual action. First, no correlation was found between EXPO political efficacy and knowledge of EXPO in the present study. Second, respondents who held a favorable attitude toward EXPO were found to have a lower level of EXPO-related political activity.

One possible explanation for the negative relationship between attitudes toward EXPO and EXPO political activity can be drawn out of the work of Mazur (1975). In a review of the research on opposition to technological innovation, Mazur found that individuals who had strong negative attitudes toward an innovation exhibited a higher level of political activity designed to prevent acceptance of the innovation. The action Seeman (1972b) referred to was designed to promote change in the situation rather than halt change. It is possible that respondents who reported high levels of EXPO political activity focused that activity on

preventing EXPO from occurring in the community. Prior to the survey, a number of citizen groups were active in promoting referendums designed to allow the public to decide whether the community should host and help pay for EXPO (Citizen Groups Demand EXPO Referendum, 1979; Tomlinson, 1979). These citizen groups were convinced that the public would not support EXPO at the polls. The results of the present study regarding referendum questions supported this contention (see Table 2, page 73).

Considering this possible explanation, a higher level of negative versus positive impacts should also be related to a higher level of EXPO political activity. Mazur (1975) found that individuals who felt a great deal would be lost by the acceptance of the innovation were more politically active. Though the likelihood of positive versus negative social impacts was highly correlated with attitudes toward EXPO, the effects of these beliefs about potential impacts were not important to EXPO political activity in the path model. This result was substantiated by the findings of hypothesis 1b. Respondents in the high EXPO political activity group were found to have similar beliefs concerning the likelihood of both positive and negative potential impacts when compared to respondents in the low EXPO political activity group.

The hypothesized model was not as useful for predicting or as consistent with alienation theory for EXPO political activity as it was for the other two dependent variables in the present study. The model accounted for only about 15% of the variance in EXPO political activity, compared to 42% for beliefs concerning the likelihood of positive versus negative impacts and 57% for attitudes toward EXPO. While alienation

theory can explain the positive effects of education, relevant knowledge and political efficacy on EXPO political activity, negative attitudes producing more political activity was inconsistent with the theory and research of alienation.

CHAPTER V

CONCLUSION

The findings of the present study can be related to the perspective of community psychology, especially to citizen participation. Fairweather and Tornatzky (1977) suggested that one of the easiest ways to prevent acceptance of social change is to fail to consult with the intended consumers of the innovation. It appeared that citizens of Knoxville were not adequately consulted by the leaders of city government and those promoting EXPO prior to the acceptance of the community as the host for EXPO (Why City Government Wants EXPO, 1979; Tomlinson, 1979). This apparent lack of citizen input was seen as a major determinant of respondents' lack of EXPO political efficacy. These low feelings of efficacy were found to be critical factors in respondents' negative attitudes toward EXPO and their beliefs that EXPO would produce more negative than positive impacts for them. It is suggested that more consultation with citizens, more concern with their apprehensions about EXPO and the acceptance of citizen input would have resulted in more favorable attitudes toward EXPO as well as a greater likelihood of more positive versus negative impacts. Regardless, it is the value position of community psychology to maximize citizen involvement in societal decisions (Rappaport, 1977). This position is also consistent with Seeman (1972a) in that engagement is a critical factor in decreasing alienation.

The second major premise of community psychology that was relevant to the results of the present study was that a lack of power and wealth

hinders the attainment of resources and the avoidance of pestilent factors in the environment (Rappaport, 1977). This is also a common assumption of writers in the field of SIA when referring specifically to the impacts of large-scale projects (e.g., Daffron, 1975; Schnaiberg & Meidinger, 1978). The position of community psychology would be to attempt strategies designed to bring about a more equal distribution of power and wealth. Further, Christenfeld (1979) advocated using this strategy at a local or community level versus a societal level. The results of this study are important to these positions of community psychology in two ways. First, the results indicate that those who perceive themselves without power and those in low SES levels anticipate differential impacts resulting from EXPO. Second, these results provide a baseline to monitor changes over time so as to evaluate any attempted mitigation plan and to judge how accurate these initial beliefs and perceptions were.

A related premise relevant to the present study and advocated by community psychology is the dissemination of the information concerning impacts. Information of this nature could be used for more rational decisions about large-scale projects. Second, the information could also be helpful to citizens and grass-root citizen groups in order to justify their problems and demands related to the project. Also, the information could be used to help stop an unwanted project on social grounds or promote a beneficial project. Finally, the information could be useful in development of a mitigation plan specifically aimed at differentially impacted groups. The point is to allow citizens more control over these projects through the dissemination of control-relevant information.

The major limitation of the study in regard to the analysis of differential social impacts was that perceptions of potential impacts were used as a dependent measure instead of actual impacts. Unfortunately, this problem was intractable, as it is in all profiling research in SIA. Discovering what the impacts were, and what groups were differentially impacted after the large-scale project occurs, does not help in developing mitigation plans to prevent some of the negative effects of the project.

Another problem of the study was that a possible ceiling effect could have produced a lack of significant differences between groups on the likelihood of negative impacts. The negative impacts of traffic congestion, noise, crime, parking problems, and increased taxes were seen almost uniformly by respondents as very likely to occur (see Table 3, page 75). In other words, respondents, regardless of their status in the different sub-groups, anticipated these negative impacts uniformly; hence, few significant differences were found. That most respondents uniformly believed these negative impacts were likely to occur was an important finding in itself.

Future research on differential social impacts would profit from a more in-depth study of relationship between quality of life and the impacts of a project. This would be important from both the perspective of community psychology and SIA because both fields emphasize changing quality of life as a function of social change. From the present study, questions concerning the relationship between quality of life and alienation resulted, providing justification for continued research on this topic.

Further research is also needed concerning the effects of knowledge on respondents' attitudes toward large-scale projects and their beliefs about expected outcomes. Knowledge of the large-scale projects has been found to be unrelated to these attitudes and beliefs directly in the present study and in a past SIA research study (Lounsbury et al., 1979). But in both studies, knowledge served as a moderator variable between attitudes and beliefs. Further investigation of this rather unique finding is needed.

Continued use of a model incorporating alienation theory and the perspective of community psychology for the study of differential social impacts is considered important. Overall, this model was useful in the prediction and understanding of differential social impacts. Improved measures of both specific and general alienation would improve the model and allow for better evaluation of its relevance.

The most important recommendation for future research concerning differential social impacts of EXPO is to continue monitoring the beliefs of citizens concerning impacts. Further, as construction and operation of EXPO continue, attempts should be made to assess the actual impacts of EXPO to complement these beliefs.

The present study found the political efficacy, especially respondents' perceived influence over EXPO-related matters, was overall the most powerful determinant in predicting respondents' beliefs, attitudes and behaviors as related to EXPO. The results of the study clearly showed that respondents believed they were powerless in regard to EXPO-related matters, that they believed EXPO would occur whether they

wanted it or not, and that these beliefs were significant determinants in producing a more negative attitude toward EXPO and anticipations of more negative and less positive social impacts resulting from EXPO. It could be concluded that respondents, due to powerlessness, were alienated from EXPO specifically. Another important finding was that attitudes toward EXPO were highly correlated with the likelihood of positive versus negative social impacts. A reciprocal predictive relationship existed between these two variables. Finally, those of a low SES level anticipated differential impacts resulting from EXPO.

Overall, the results of the present study indicated that citizens who consider themselves powerless and those falling in the low SES group anticipated more hardships and less benefits from EXPO. In the words of Rappaport (1977), a lack of "loot and clout" seemed to best describe those who perceive EXPO as not advantageous.

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APPENDIXES

APPENDIX A

THE UNIVERSITY OF TENNESSEE



COLLEGE OF LIBERAL ARTS
DEPARTMENT OF PSYCHOLOGY

Knoxville, TN. 37916
615-974-2531

Hello, my name is _____ and I'm working with the Department of Psychology at the University of Tennessee. You were selected at random from all the residents of Knoxville to participate in this city-wide survey of community issues. We are particularly interested in your opinions about EXPO 82. May I ask you some questions today about these issues.

APPENDIX B

THE UNIVERSITY OF TENNESSEE



COLLEGE OF LIBERAL ARTS
DEPARTMENT OF PSYCHOLOGY

Knoxville, TN 37916
615-974-2531

Dear Knoxville Resident:

The Social Impact Assessment Team connected with the Department of Psychology of the University of Tennessee is conducting a city wide survey concerning the attitudes and opinions of city residents toward the 1982 International Energy Exposition (EXPO 82).¹ Your residence has been selected at random to be included in our sample. The survey itself consists of questions concerning your expectations of potential benefits and problems of EXPO 82, your attitudes toward EXPO 82, and your satisfaction with services and perceptions of the quality of life in the community.

We are interested in your opinions and, therefore, there are no correct or incorrect answers. If you do agree to participate in this survey you are not obligated to answer any question you feel is inappropriate and you may discontinue the interview at any time. As we are interested in the opinions of residents of the city in general, your name and address will not be associated with your answers and all information obtained will remain strictly confidential. Your signature below will signify only that you have agreed to participate in this survey and will serve as a release if the results of this survey merit publication. If you have any questions feel free to ask or you may call the number below:

Dr. John W. Lounsbury
Department of Psychology
University of Tennessee
974-3423

Gregory J. Meissen
Department of Psychology
University of Tennessee
974-6782

I hereby agree to participate in the survey described above:

Signature: _____

Date: _____

¹The Social Impact Assessment Team is not associated with any public or private group except those stated above.

APPENDIX C

A Survey of Community Issues

First, I'd like to ask you a few questions about your feelings toward our community.

1. I'm going to read to you a number of services which are available in most cities. I'd like you to tell me if you are Very Satisfied, Satisfied, Neutral, Dissatisfied, or Very Dissatisfied with each service in Knoxville. The first service is

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied
a) Fire Protection	1	2	3	4	5
b) Telephone Service	1	2	3	4	5
c) Zoning Laws	1	2	3	4	5
d) Availability of Housing	1	2	3	4	5
e) Streets and Highways	1	2	3	4	5
f) Police Protection	1	2	3	4	5
g) City Government	1	2	3	4	5
h) Cultural Attractions	1	2	3	4	5
i) City Parks/Playgrounds	1	2	3	4	5
j) School System	1	2	3	4	5
k) City Recreational Facilities	1	2	3	4	5
l) Public Transportation	1	2	3	4	5

2. Do you think your city government gives you your money's worth in services? Yes No DK/NR

3. Do you think your city government is responsive to people like you? Yes No DK/NR

4. a) Do you think that voting is the only way you have any say about the way the city government runs things, or are there lots of ways?

Lots of Ways Some Ways Voting Only Way No Way to Have a Say Refused/NA
Other _____

b) Do you consider yourself a Democrat, a Republican or an Independent?

Democrat Republican Independent DK/NR

c) Do you consider yourself a conservative, a moderate, or a liberal?

Conservative Moderate Liberal DK/NR

5. For each of the pairs of words I'm going to read to you I want you to rate on a 7 point scale how you feel about Knoxville. For example, the first pair of words are Private vs. Not Private. If 1 is Private and 7 is Not Private, how would you rate Knoxville overall.

	1	2	3	4	5	6	7	
a) Private	:	:	:	:	:	:	:	Not Private
b) Tolerant	:	:	:	:	:	:	:	Intolerant
c) Changing	:	:	:	:	:	:	:	Stable
d) People Similar to Me	:	:	:	:	:	:	:	People Dissimilar to Me
e) Liberal	:	:	:	:	:	:	:	Conservative
f) Wealthy	:	:	:	:	:	:	:	Poor
g) Unsafe	:	:	:	:	:	:	:	Safe
h) Crowded	:	:	:	:	:	:	:	Uncrowded
i) Close-knit	:	:	:	:	:	:	:	Not Close-knit
j) Unpleasant	:	:	:	:	:	:	:	Pleasant
k) Fast Paced	:	:	:	:	:	:	:	Slow Moving
l) Noisy	:	:	:	:	:	:	:	Quiet
m) Pretty	:	:	:	:	:	:	:	Ugly
n) Littered	:	:	:	:	:	:	:	Unlittered
o) "Big City"	:	:	:	:	:	:	:	"Small Town"

-2-

6. What best describes your general feelings about Knoxville as a place to live?

1 2 3 4 5 6 7
 Excellent Very Good Good Average Poor Very Poor Terrible

7. Below is a picture of a ladder. Suppose we say that the top of the ladder represents the best possible life for you and that the bottom represents the worst possible life for you.

- a) Where on the ladder do you think you will be 5 years from now?

Step Number _____

- b) Where on the ladder would you say you stood 5 years ago?

Step Number _____

- c) Where on the ladder do you feel you personally stand at the present time?

Step Number _____

10	Best Possible Life
9	
8	
7	
6	
5	
4	
3	
2	
1	
0	Worst Possible Life

8. How do you feel about your life as a whole?

7 6 5 4 3 2 1
 Delighted Pleased Mostly Satisfied Mixed Mostly Dissatisfied Unhappy Terrible

One current community issue concerns the proposed 1982 International Energy Exposition, EXPO 82.

9. Here are some questions concerning EXPO 82 specifics. It's not expected that everyone will know all the answers so for those you don't know, give your best estimate.

- a) How long will EXPO 82 last? _____

- b) Where will the EXPO site be located? (ask for specifics) _____

W R

- c) Would you say that Mayor Randy Tyree is a supporter, is neutral, or is an opponent of EXPO?

Supporter Neutral Opponent DK/NR

- d) Has the City of Knoxville appropriated funds for EXPO?

Yes No DK/NR

- e) Has the State of Tennessee appropriated funds for EXPO?

Yes No DK/NR

- f) Has the Federal government appropriated funds for EXPO?

Yes No DK/NR

Now I'm going to read a question with several alternative answers. Please choose the best answer.

- g) Who is in charge of buying the land for the EXPO site? Is it . . .

- 1) Private businesses and developers
- 2) Knoxville Community Development Corporation (KCDC)
- 3) State of Tennessee
- 4) Knoxville International Energy Exposition Corporation (KIEE)
- 5) City of Knoxville
- 6) Citizens for a Better Knoxville

-3-

h) Who will own the EXPO site? Will it be . . .

- 1) Private businesses and developers
- 2) Knoxville Community Development Corporation (KCDC)
- 3) State of Tennessee
- 4) Knoxville International Energy Exposition Corporation (KIEE)
- 5) City of Knoxville
- 6) Citizens for a Better Knoxville

10. I'm going to read to you the major sources of information in Knoxville. I'd like for you to tell me if each source of information is Very Important, Important, Neutral, Unimportant, or Very Unimportant to you personally. The first source of information is . . .

	<u>Very Important</u>	<u>Important</u>	<u>Neutral</u>	<u>Unimportant</u>	<u>Very Unimportant</u>
a) Local Newspapers	1	2	3	4	5
b) Local Radio	1	2	3	4	5
c) Friends and Acquaintances	1	2	3	4	5
d) TV	1	2	3	4	5
e) Co-workers	1	2	3	4	5
f) Meetings, Rallies	1	2	3	4	5
g) Groups, Clubs, Organizations	1	2	3	4	5
h) Church	1	2	3	4	5
i) Other (Specify _____)	1	2	3	4	5

11. Do you think that the publicity about EXPO has been good for Knoxville?

Yes No DK/NR

12. In your opinion what benefits will EXPO bring about before and during the exposition? _____

13. In your opinion what benefits will EXPO bring about after the exposition? _____

14. In your opinion what problems will EXPO cause before and during the exposition? _____

15. In your opinion what problem will EXPO cause after the exposition? _____

16. Next I'd like to ask you some questions about community change and EXPO. If EXPO comes to Knoxville a number of things in the community might change. I'm going to read you a list of things that could happen. Referring to Roman Numeral I, please tell me how likely each of these changes are. The first potential change is Downtown Revitalization. Is it (read alternatives).

	<u>Certain to Happen</u>	<u>Very Likely</u>	<u>Likely</u>	<u>Perhaps</u>	<u>Unlikely</u>	<u>Very Unlikely</u>	<u>Impossible to Happen</u>
a) Downtown revitalization	1	2	3	4	5	6	7
b) Bigger city atmosphere	1	2	3	4	5	6	7
c) Increased traffic congestion	1	2	3	4	5	6	7
d) More public entertainment (bowling, theatres, restau- rants)	1	2	3	4	5	6	7
e) More stores and shopping areas	1	2	3	4	5	6	7
f) Increased business	1	2	3	4	5	6	7

-4-

	Certain to Happen	Very Likely	Likely	Perhaps	Unlikely	Very Unlikely	Impossible to Happen
g) Increased noise	1	2	3	4	5	6	7
h) Increased tourism	1	2	3	4	5	6	7
i) More and better jobs	1	2	3	4	5	6	7
j) Increase in undesirables	1	2	3	4	5	6	7
k) Housing shortages	1	2	3	4	5	6	7
l) Increased land values	1	2	3	4	5	6	7
m) Increased crime	1	2	3	4	5	6	7
n) Improved mass transit	1	2	3	4	5	6	7
o) State, national & inter- national recognition of town	1	2	3	4	5	6	7
p) Increased taxes	1	2	3	4	5	6	7
q) Increase in visitors from foreign countries	1	2	3	4	5	6	7
r) Parking problems	1	2	3	4	5	6	7
s) Increase in city size	1	2	3	4	5	6	7
t) Downtown parks	1	2	3	4	5	6	7
u) Important energy capital	1	2	3	4	5	6	7
v) Improved community spirit	1	2	3	4	5	6	7

17. Suppose that some of these things were to happen in Knoxville if EXPO comes. Referring to Roman Numeral II please tell me how desirable or undesirable each would be to you. How desirable is it to have . . . (read each time)

	Extremely Undesirable	Undesirable	Undesirable	Neutral	Desirable	Very Desirable	Extremely Desirable
a) More public entertainment (bowling, theaters, restaurants)	1	2	3	4	5	6	7
b) More stores and shopping areas	1	2	3	4	5	6	7
c) Increased tourism	1	2	3	4	5	6	7
d) Increased land values	1	2	3	4	5	6	7
e) State, national & inter- national recognition of town	1	2	3	4	5	6	7
f) Increase in visitors from foreign countries	1	2	3	4	5	6	7
g) Bigger city atmosphere	1	2	3	4	5	6	7
h) Increase in city size	1	2	3	4	5	6	7

18. Some changes can be called desirable or undesirable. Listed below are some changes of varying importance to Knoxville. Referring to Roman Numeral III please tell me how important or unimportant each change would be to you. How important is . . . to you. (read each time)

	Extremely Unimportant	Very Unimportant	Unimportant	Neutral	Important	Very Important	Extremely Important
a) Downtown revitalization	1	2	3	4	5	6	7
b) Increased traffic congestion	1	2	3	4	5	6	7
c) More and better paying jobs	1	2	3	4	5	6	7
d) Increased business	1	2	3	4	5	6	7
e) Increased noise	1	2	3	4	5	6	7
f) Crowding in schools	1	2	3	4	5	6	7
g) Increase in undesirables	1	2	3	4	5	6	7
h) Housing shortages	1	2	3	4	5	6	7
i) Increased crime	1	2	3	4	5	6	7
j) Increased taxes	1	2	3	4	5	6	7
k) Improved mass transit	1	2	3	4	5	6	7
l) Parking problems	1	2	3	4	5	6	7
m) Downtown parks	1	2	3	4	5	6	7
n) Improved community spirit	1	2	3	4	5	6	7

Now I would like to ask you a few questions concerning your opinion of EXPO.

- II. 1. Do you think you have a great deal of influence, some influence, very little influence or no influence on the decisions concerning EXPO?

Great Deal Some Very Little None

2. Do you think EXPO 82 involves a conflict between the interests of business and the interests of the public as a whole?

Yes No DK/NR

3. Do you think EXPO 82 involves a conflict between local government and the interests of the public as a whole?

Yes No DK/NR

-5-

4. Up until now what have you done to express your opinions on EXPO 82? (circle those indicated by respondent as you read them) Have you . . .

- a) discussed feelings with family or friends
- b) talked with strangers to convince them of your view
- c) attended a public meeting on EXPO
- d) contacted a government official by letter or phone
- e) signed a petition
- f) solicited support from the business community
- g) donated money to an organization
- h) volunteered time to an organization
- i) written a letter to a newspaper or magazine
- j) anything else (specify) _____

5. Are you a member of any groups, clubs, or voluntary associations that have taken a stand on EXPO 82?

☐ NO

☐ YES

b) Could you give me their names and their stand?

- | | | |
|----------|-----|-----|
| 1) _____ | Pro | Con |
| 2) _____ | Pro | Con |
| 3) _____ | Pro | Con |
| 4) _____ | Pro | Con |
| 5) _____ | Pro | Con |

6. Under what conditions, if any, will EXPO make you leave this area? _____

7. Are you in favor of a referendum concerning Knoxville as a site for EXPO 82?

Yes NO DK/NR

8. If a referendum were held today concerning Knoxville as the site for EXPO 82 would you:

- a) vote in support of Knoxville as the EXPO 82 site, or
- b) vote against Knoxville as the EXPO 82 site, or
- c) would you not vote?

9. Do you think a referendum will be held concerning Knoxville as the site for EXPO 82?

Yes No DK/NR

10. Are you in favor of a referendum concerning city funding for EXPO 82?

Yes No DK/NR

11. If a referendum were held today concerning city funding for EXPO 82 would you:

- a) vote in support of city funding for EXPO 82, or
- b) vote against city funding for EXPO 82, or
- c) would you not vote?

12. Do you think a referendum will be held concerning city funding for EXPO 82?

Yes No DK/NR

13. If it were up to you alone, would you allow EXPO 82 to be held in Knoxville?

Yes NO DK NR

14. Do you think EXPO 82 will happen?

Yes No DK NR

To conclude this interview I'd like to ask you a few questions about yourself.

III. 1. How many years have you lived in the Knoxville area? _____

2. Are you buying or renting your residence?

Own Rent

3. Do you own (any other) property in the city or county?

Yes No NR

-6-

4. What is your marital status? (do not read choices)

married single divorced separated widowed other (specify) _____

5. How many dependent children do you have and what are their ages? _____

6. Are you currently employed, unemployed, retired, or other?

employed unemployed retired other (specify) _____

7. Where do you work? _____

8. What is your occupation? _____

9. (If married), is your spouse employed?

yes no NR

10. Where does (he/she) work? _____

11. What is (his/her) occupation? _____

12. What is the highest level of education you have achieved?

none

grade 1 2 3 4 5 6 7 8 9 10 11 12

trade, industrial, or business school

some college

college graduate

post graduate studies

other (specify) _____

13. What year were you born? _____

14. Keeping in mind that the survey is confidential, approximately what was your total family income in 1978 before taxes? Please refer to the back of the card, Roman Numeral IV.

- | | | |
|-------------------|--------------------|--------------------|
| 1) below \$3,500 | 4) \$10,000-15,000 | 8) \$30,000-35,000 |
| 2) \$3,500-6,500 | 5) \$15,000-20,000 | 9) \$35,000-40,000 |
| 3) \$6,500-10,000 | 6) \$20,000-25,000 | 10) over \$40,000 |
| | 7) \$25,000-30,000 | 11) RA |

15. Are there any questions or comments that you have concerning the survey? _____

Since the issues we talked about today are important to Knoxville we hope to continue to gather information concerning these issues. With this in mind would you consider being included in the next interview to occur not sooner than a year from now.

NO

YES

→ We appreciate your participation in this ongoing project. In order to contact you again next year we need to obtain your name, address, and phone number.

Name _____

Address _____

Phone _____

→ Would you like a copy of the results of this city-wide survey?

NO

YES

→ (Record name and mailing address on separate sheet on back of clipboard.)

→ Thank you very much for your time and participation.

To the Interviewer:

Sex: M F

Race: W B Other _____

Name of Interviewer: _____

Date of Interview: _____

VITA

Gregory J. Meissen was born in Wichita, Kansas, on July 30, 1952. He attended elementary schools in that city and graduated from Bishop Carroll High School with honors in May 1970.

In September 1970, he entered the Colorado School of Mines as an engineering major. After a year, he returned to Wichita, and enrolled at Wichita State University as a psychology major. In September of 1973, he was employed as a counselor for Passport for Adventure, a therapeutic camping program for juveniles sponsored by the St. Francis Homes for Boys and Girls. He returned to Wichita State in September of 1975, and graduated cum laude with a Bachelor of Arts degree in psychology in May 1977.

Meissen entered the Graduate School of The University of Tennessee at Knoxville in September 1977 to study community psychology. In July 1980, he was appointed to the faculty of Wichita State University as an Assistant Professor of Psychology. He was awarded the Doctor of Philosophy degree in psychology in August 1980.

He is a member of the American Psychological Association (APA) and the Division of Community Psychology of APA.