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COMMUNITY CONFLICT IN THE NUCLEAR POWER ISSUE

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COMMUNITY CONFLICT
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Ronald S. Burt

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COMMUNITY CONFLICT IN THE NUCLEAR POWER ISSUE

ABSTRACT

This is the first of a two part discussion the purpose of which is to demonstrate that a frankly structural, or network, approach to the analysis of community decision-making allows an observer to anticipate and manage community response to specific policies. Here I am concerned with anticipating community response. In part two (Burt, 1978), I am concerned with conflict resolution strategies. The specific policy used as illustration is siting nuclear power facilities. Published accounts of siting nuclear facilities are used to identify basic social parameters of the nuclear power issue as a community conflict. Changes in the form and content of relations in the network among opponents and proponents of a facility are described. Subsequently, the description is used to specify a causal model of the manner in which conflict escalation is promoted or inhibited by the characteristics and leadership structure of a community in which a nuclear facility is proposed. Hypotheses are derived predicting what types of communities can be expected to become embroiled in conflict and the process that conflict escalation will follow.

I. INTRODUCTION

While social scientists have long been sensitive to the significance of social, economic and political relations among leaders making policy decisions, the last decade has witnessed an especially rapid growth in the explicit use of network concepts for modelling such considerations. My purpose here is to demonstrate that a frankly structural approach to the analysis of community decision-making allows the observer to anticipate community response to specific policies. In this paper, I am concerned with policies for siting nuclear power facilities. I first draw on published accounts of siting nuclear facilities in order to identify the basic social parameters of the nuclear power issue as a community conflict. Changes in the form and content of relations in the network among opponents and proponents of a facility are described. In the subsequent section, I specify a causal model of the manner in which conflict escalation is promoted or inhibited by the characteristics and leadership structure of a community in which a nuclear facility is proposed. Hypotheses are derived predicting what types of communities can be expected to become embroiled in conflict and the process that conflict escalation will follow.

II. THE STRUCTURE OF COMMUNITY CONFLICT IN THE NUCLEAR POWER ISSUE

With the nuclear destruction of Hiroshima and Nagasaki, the threat of annihilation during a cold war nearly transformed into a hot war during the Cuban missile crisis, the popular media presentations of radiation mutation, and the ongoing proliferation of nuclear weapons, it is not too surprising to find that many Americans fear nuclear power.¹ While there is a considerable

popular literature catering to this fear by emphasizing the linkage between nuclear power and its applications in weapon development², fear of nuclear power can not be dismissed as mere emotional rant from those ignorant of the true facts. On the one hand, we have technical experts presenting studies showing that, while nuclear power involves some risks, the risks involved in terms of the safety of persons working in the nuclear facility, the safety of persons living near the facility and the safety of the natural environment surrounding the facility are far less than the same risks involved in fossil fuel power facilities.³ On the other hand, we have technical experts emphasizing evidence on the underestimation of the possible dangers of reactor failures, the unsolved problems of transporting nuclear waste, the constant problem of thermal discharge, and the problem of an emergency core-cooling system.⁴ When technical experts are ambiguous on something frightening to the average citizen as is nuclear power, one can expect conflict over the establishment of nuclear facilities both to occur and to be based on rumour and misunderstanding. Indeed such appears to be the case already.⁵ It is in just such situations that social factors achieve preeminence in conflict; factors that have little or nothing to do with the technical problems being questioned; factors that nevertheless can transform a discussion of technical problems into a major confrontation.

The Nuclear Power Issue as a Community Conflict

In order to understand conflict in the nuclear power issue, it is important to be clear about how the public becomes involved in the issue. Unfortunately there is no first-hand research comparing communities so that I have had to rely on secondary sources presenting partial accounts of the issue.⁶ The composite picture here is accordingly tentative. While the social aspects of the nuclear power issue can only be analyzed at this time a considerable

distance from fact, public participation in a formal manner is well documented. In accordance with the Atomic Energy Act, the U. S. Nuclear Regulatory Commission (NRC) provides the public an opportunity to scrutinize the establishment of nuclear power plants, nuclear waste repositories, or nuclear facilities in general through formal hearings; particularly hearings on construction permits and operating licenses.⁷

If everything proceeded to the path of least conflict, a utility or company or coalition of firms wishing to establish a nuclear facility would go through a process something as follows. After testing a variety of possible sites for their conformity to NRC safety and environmental standards, and checking with local government and business interests so as to gauge the local support for the facility, a site is selected and "ten or more large volumes" of the environmental report and safety analysis report are submitted to the NRC with an application for a construction permit for the proposed facility. The NRC staff conducts safety, environmental, and anti-trust reviews of the proposed facility while an additional safety review is conducted by the independent Advisory Committee on Reactor Safeguards.

As soon as the application is filed, notice of that fact is published in the Federal Register and copies of the application are furnished to appropriate State and local authorities and to a public document room established near the site of the proposed facility and another in Washington, D.C. Simultaneously, notice is published in the Federal Register and local newspapers stating that in thirty days there will be a public hearing on application for the license for the proposed facility. The public hearing is conducted by a three person Atomic Safety and Licensing Board (ASLB) which makes an initial decision as to whether the permit should be granted. Two of the members of the ASLB are technical experts and one is to be qualified in administrative proceedings. Affected members of the public are invited to petition (within

a specified time before the hearing) the ASLB appointed to the case if they wish to: 1) submit a written statement at the hearing, 2) make an oral presentation at the hearing, or 3) become an "intervenor" in the proceeding with full participatory rights including cross-examination of other participants. Petitions to intervene are considered on the basis of the extent to which the petitioner's property, financial or other interests are affected by the proposed facility and the extent to which he is offering "irrelevant, duplicative, or repetitive evidence and argument" given the other petitioners.⁸ Additionally, if the NRC feels that the same problem is being raised at separate hearings, they can set up a special "rulemaking" hearing to deal with that point so as to proceed with the problems of the specific facility being proposed.⁹ As with any decision by the ASLB, the decision to deny a petition can be appealed by the petitioner.¹⁰ The process for obtaining an operating license occurs in the same manner once a nuclear facility is nearing completion.¹¹ Once licensed, the facility remains under NRC surveillance and undergoes periodic inspections throughout its operating life.

Note that the above process, a process among the proponents of a proposed facility, is primarily concerned with economic and legally defined environmental and safety questions. The major proponent, a utility or coalition of corporations seeking to establish the facility, wishes to provide a source of power capable of meeting a projected future demand at a rate per kilowatt hour lower than fossil fuel. Nuclear facilities have the potential to be quite profitable.¹² As a consequence, the spread of nuclear power has created a need for nuclear waste repositories. In accordance with NRC rules, technical experts are employed to conduct requisite safety and environmental tests for the company proposing the facility. Academia and the federal (and to varying extents, the state¹³) government become involved toward the end of

insuring efficient facility operation under existing legal codes.¹⁴ Local business interests are informed of the increased tax base and/or income that will result from constructing the facility and are therefore well disposed toward it.¹⁵ The County Board of Supervisors (and potentially other local zoning and decision-making agencies) enters the picture as the coordinating mechanism determining land use for the proposed site.¹⁶ These economic and legal concerns can be expressed in specific questions. How much will the tax base and local business benefit from the proposed facility? Do the site and proposed facility meet the NRC safety and environmental regulations?

In contrast to the facility's proponents who use concern over comparatively specific economic and legal questions to solicit initial support, the facility's opponents are concerned with less easily specified questions and accordingly solicit support based on more ambiguous grounds. The prime question raised involves the possible effects on the local environment of radiation poisoning from a reactor meltdown and the transportation of nuclear wastes.¹⁷ The second (and sometimes uppermost¹⁸) question involves the thermal pollution discharged by a nuclear facility. These questions are legitimated to the undecided citizen by the fact that public hearings are to be held concerning the proposed facility. The undecided citizen being asked to support opposition to a proposed facility is faced with the question; "If the facility is safe, why are there to be public hearings?" Opposition to a facility can organize anywhere from the first announcement by a company that it is considering an area for a nuclear facility up to and beyond the issuance of an operating license.¹⁹ Opposition initiates with an individual or group reacting to news of the proposed facility. Support is then solicited, usually in terms of the above questions, from other individuals and groups on the basis of social relations.²⁰ Those concerned about the environment tend

to be well educated, politically left individuals.²¹ A concerned individual speaks to friends and co-members of local groups perceived to be supportive who in turn speak to their friends, and so on. These support solicitations extend in the same manner to national organizations espousing similar concerns (e.g., Environmental Defense Fund, Friends of the Earth, National Resources Defense Council, Sierra Club) and to technical experts espousing data in keeping with their social concerns (e.g., Union of Concerned Scientists).

With the formation of opposition group(s), support is mobilized by the facility's proponents on a social basis as well. Local business interests activate social relations among friends and, in place of the earlier economic and legal concerns, we now have appeals to one's sense of progress and confidence in American institutions.²²

As conflict develops between a facility's proponents and opponents, each side begins to borrow existing stereotypes of the other side; opponents viewing the facility's supporters as harbingers of doom while supporters view the facility's opponents as naive impediments to progress.²³

Individuals and groups linked by social relations to both opponents and proponents are forced to be neutral in the controversy since they can not support one side without rejecting the other. Academia can not "legitimize" either side in the controversy since technical experts are used by both sides to support their perspectives. Local government agencies may support the facility, however, elected officials look to their clamoring constituencies so that the local government is at best a partial supporter for both sides. Local business too is interested in supporting the proposed facility but hesitant to alienate workers and consumers opposed to the facility.

Public hearings are conducted but little issue resolution can occur in such a setting. Hearings are intended to resolve specific questions over a

proposed facility. This intended purpose is enforced by the ASLB. However, the questions at issue now are of a social (and accordingly vague) nature. The insistence of the NRC through its ASLB on specific, concrete questions in the hearing only serves to further alienate the facility's opponents so they view the NRC as a supporter of the proposed facility.²⁴ Opponents use their technical advisors as a support for their social concerns; concerns that can not easily be cast in concrete questions. Technical safety and environmental questions, questions that can be cast in concrete terms, are used as tools by each side to solicit support; proponents making comparisons to other sources of electricity and opponents emphasizing the fact that disaster is after all still possible. Accordingly, the public hearings must degenerate into rhetoric and legal gymnastics while the controversy rages in the community outside. Not surprisingly, Ebbins and Kasper (1974:252) found this to be the case in their analysis of public participation in the hearings on the nuclear power issue:²⁵

The relative ease of access to the Atomic Energy Commission hearings, while providing a means for them to express themselves, does little or nothing to diminish their feelings of powerlessness in the face of decisions which will impact on their lives. Their participation can be characterized as a manifestation of their anger and frustration at what they interpret as a hollow extension of procedural due process and the denial of meaningful or substantive due process. The result is that the hearings are, in the view of some citizens, expensive wars of attrition, designed to obfuscate rather than clarify the true risks and benefits of nuclear power.

In this emotional context, it is a simple matter for extremist leaders to emerge so that no matter what the decision of the public hearings and subsequent appeals moderate leaders can be overruled and support mobilized for potentially extra-legal action.²⁶

The hearing process with its emphasis on questions concerning only a specific proposed facility (the rulemaking hearing being the proper forum

of questions pertaining to multiple facilities); plus those questions being necessarily posed by citizens directly affected by the facility, and the mobilization of support by opponents and proponents in terms of economic and social concerns of the residents surrounding the proposed facility, combine to make the nuclear power issue a distinctly local or "community" conflict. As summarized by Ebbins and Kaspers (1974:22-23):

But while the number of contested nuclear power plants at both the construction and operating license stages have increased dramatically since 1969, our observations have led us to believe that they are, for the most part, essentially individual, local actions and do not represent a consolidated national effort, as is often alleged. ... There is even some evidence that suggests to us that were plans to build such a plant in one locality to change and a different site elsewhere selected, those who have joined the opposition would drop their active roles.

Basic Social Parameters in the Nuclear Power Issue as a Community Conflict

As a structural process, community conflict involves two basic types of parameters; the form of conflict given by the pattern of relations among the participants in the conflict and the content of conflict given by the substance of the communications exchanged by participants in the conflict.²⁷

The structure of the nuclear power issue as a community conflict can now be stated in terms of these basic social parameters using recent developments in network analysis to make the parameters maximally explicit. Note the concern here with parameters in the escalation of a particular conflict. This is a quite modest concern taken in light of work available on the general sociology of conflict ruling out as it does both the causes and the consequences of conflict.²⁸

Stages of Conflict Escalation

In the course of responding to events confronting them, individuals and groups as "actors" in a community pursue a wide variety of actions; new buildings are proposed, old ones destroyed, new social programs are initiated,

careers are planned, etc. Each of these day-to-day activities is potentially a seed for eventual community conflict. It is not until a "precipitating event" occurs, however, that what was previously a matter-of-fact course of action becomes the preliminary stage of a community conflict. Recognized in both theoretical and empirical work on conflict, the precipitating event is any occurrence that sparks initial conflict between two or more actors.²⁹ Analyzing community mobilization over air pollution in Illinois for example, Bridgeland and Sofranko (1975) found that the best predictor of mobilization was not the actual level of pollution but rather the occurrence and publication of some event demonstrating the potentially dangerous consequences of pollution (e.g., property damage, livestock or fish kills, evacuations, hospitalizations, etc.). Further, when controlling for the occurrence of a precipitating event, the actual level of pollution in a community had no association with mobilization in the community to combat pollution! The precipitating event in the nuclear power issue is undoubtedly connected with the announcement of an impending nuclear facility in an area. However, the announcement itself is not sufficient since opposition does not always develop immediately after the first announcement of a public hearing for a proposed facility. Three factors in combination seem to act as a precipitating event here; 1) an announcement that a nuclear facility is being or will be constructed, 2) publicity of the potential dangers of such a facility, and 3) a perception on the part of some citizens who object to the presence of such a facility that they could prevent the construction of the facility by mobilizing in opposition to it.³⁰

Recognizing the precipitating event in community conflict is crucial because it distinguishes the potential issue from the actual issue, the preissue or implicit stage of community conflict from the issue or explicit stage. The

"preissue" stage of community conflict consists of all actions taken prior to the precipitating event and relevant to the subsequent conflict. In the nuclear power issue, preissue activities involve the NRC, the company proposing a facility, technical experts and local business and government concerns. A literature has developed on strategies available to those in power that prevent specific questions from ever arising as explicit issues to be resolved.³¹ Where these strategies are effectively employed, a community conflict never develops as such and it is difficult--although not impossible--to analyze the actions occurring in the preissue stage of conflict.³²

Subsequent to the precipitating event, community conflict enters the stage of being an explicit issue to be resolved by the community decision-making process.³³ It is in this stage that opponents and supporters of the proposed facility in the nuclear power issue activate social relations so as to mobilize support for their respective sides. At some point in this decision-making process, there will be a formal confrontation between factions in conflict. While communities do occasionally have popular referenda in the nuclear power issue as a means of indicating popular support for a proposed facility, the formal confrontation more often than not consists of the public hearing occurring after the precipitating event. It is of some moment here to distinguish the "preconfrontation" stage of an issue as all actions taken after the precipitating event and before a formal confrontation from the "aftermath" stage of an issue as all actions taken subsequent to formal confrontation.³⁴ Depending on the degree to which conflict has escalated by the time a formal confrontation occurs, the losers in the confrontation may either retire from the conflict or, if escalation has progressed significantly, pursue the conflict with more extremist tactics and ideology that characterized the preconfrontation stage.³⁵

In short, community conflict in the nuclear power issue can be seen--in an admittedly crude sense--as having three developmental stages; a pre-issue stage, a preconfrontation stage, and an aftermath stage. The first two stages are separated by the occurrence together of three circumstances as a precipitating event. The last two stages are separated by the occurrence of a formal confrontation in a public hearing between supporters and opponents of a proposed facility.

Issue Network

The "escalation" of a conflict through the above stages involves changes in the relations among actors in a community. It is useful to be able to discuss these relations explicitly. Participants in a conflict can be seen as interconnected within an issue-specific network, an "issue network", composed of what can be simplified here to three types of relations; 1) support relations between participants on the same side of the conflict, 2) opposition relations between participants on opposite sides of the conflict, and 3) null relations between participants who are neutral toward one another or between participants and those actors not yet involved in the conflict. The issue network for a community conflict is then the complete set of relations concerning the conflict (support, null, and opposition) involving the actors participating in the conflict.

It is important for describing and resolving conflict to distinguish between relations and distances separating actors in a conflict. Given the relation between actors i and j as a tendency for interaction between the actors in regard to some conflict:

$$z_{ij} = z_{ji} = \begin{cases} +1, & \text{if } i \text{ and } j \text{ support one another,} \\ 0, & \text{if } i \text{ and } j \text{ are neutral toward one another} \\ -1, & \text{if } i \text{ and } j \text{ oppose one another,} \end{cases} \quad (1)$$

then the distance between i and j is the difference between the overall pattern of relations involving i and j as participants in the conflict:

$$d_{ij} = d_{ji} = \sqrt{\sum_{k=1}^N (z_{ik} - z_{jk})^2}, \quad (2)$$

where N is the number of actors in the issue network. If the distance between actors i and j is zero, then i and j have exactly the same relations with every actor participating in the conflict (the difference between z_{ik} and z_{jk} is zero for all actors k). The larger the distance between i and j , then the more different are the relations linking i versus j to actors participating in the conflict.³⁶

The form and content of a conflict are made explicit by the issue network for the conflict. Issues are of the same "type" to the extent that they have the same form and content.³⁷ The form of the conflict is given by the $N(N-1)/2$ different relations and distances between participants in the conflict. The content of the conflict is given by the substance of the communications occurring in each of these $N(N-1)/2$ relations. The escalation of a conflict through its stages consists of changes in the form and content of an issue network.

The Form of Conflict Escalation in the Nuclear Power Issue

The nuclear power issue involves (for the purposes of illustration here) eight "groups" of individuals as participants. The issue network among these "actors" is presented in Table 1 for the preissue stage of conflict. The relations between actors (the z_{ij}) are given in the diagonal and lower diagonal cells. The distances between actors (the d_{ij}) are given in the upper diagonal cells. For example, the initial relation between the company proposing a facility (C) and the Nuclear Regulatory Commission (NRC) is neutral (zero entered in the second row, first column of Table 1) while the distance between the two actors is nonzero (according to Eq. (2), $d_{12} = 1.4 = \sqrt{\{(1-0)^2 + (0-1)^2 + 4(1-1)^2 + 3(0-0)^2\}}$, which is entered in the first row, second column of Table 1.)³⁸ Table 1 makes explicit the relations among participants in the nuclear power issue prior to the issue emerging. The company proposing a facil-

ity is supported by academia (A) in the form of technical experts, and local business (LBF) and local government agencies such as the County Board of Supervisors (LGA). These three actors similarly support the NRC. While the technical experts are not internally supporting one another (zero in the third diagonal cell), the local business and government interests are both internally organized and support one another--at least in regard to the proposed facility. At this stage of conflict neither the national opposition groups nor the local citizens are organized over their views on the proposed facility so the entire three bottom rows of the issue network are null.

-----Table 1 About Here-----

With the occurrence of a precipitating event, an opposition relation develops between local citizens and the company proposing the facility. Mobilizing social support, citizens form voluntary associations against the proposed facility and activate national opposition groups (groups that enter the conflict already opposed to the company as well as NRC and having their own expert support from academia). Support is solicited from local government agencies (particularly from elected officials who must respond to constituencies) and local business firms. Local organizations seem to be neutral toward the national groups although their initial support of the proposed facility may result in some resentment of outside agitators. Table 2 presents the issue network after these changes.

-----Table 2 About Here-----

In response to the opposition from citizens, proponents of the facility also activate social relations so as to mobilize support for the facility. Table 3 presents the resulting changes in the issue network. Local citizens supporting the facility form voluntary associations in support of the company and NRC while in opposition to the local citizen and national opposition

TABLE 1

THE NUCLEAR POWER ISSUE NETWORK AT A PREISSUE STAGE OF CONFLICT*

Participants in the Conflict	C	NRC	A	LBF	LGA	LCS	LCO	NGO
Company proposing the nuclear facility (C)	1	(1.4)	(2.0)	(1.4)	(1.4)	(2.0)	(2.0)	(2.0)
Nuclear Regulatory Commission (NRC)	0	1	(2.0)	(1.4)	(1.4)	(2.0)	(2.0)	(2.0)
Academia as technical experts (A)	1	1	0	(1.7)	(1.7)	(1.4)	(1.4)	(1.4)
Local Business firms (LBF)	1	1	0	1	(0.0)	(2.0)	(2.0)	(2.0)
Local Government Agencies (LGA)	1	1	0	1	1	(2.0)	(2.0)	(2.0)
Local Citizens Supporting the facility (LGS)	0	0	0	0	0	0	(0.0)	(0.0)
Local Citizens Opposing the facility (LCO)	0	0	0	0	0	0	0	(0.0)
National Groups Opposing the facility (NGO)	0	0	0	0	0	0	0	0

*Relations are taken from Eq. (1) and are given in and below the diagonal while distances are taken from Eq. (2) and given above the diagonal in parentheses.

TABLE 2

THE NUCLEAR POWER ISSUE NETWORK AT A STAGE OF CONFLICT WHEN OPPOSITION TO A FACILITY HAS MOBILIZED*

Participants in the Conflict	C	NRC	A	LBF	LGA	LCS	LCO	NGO
Company proposing the nuclear facility (C)	1	(1.7)	(2.8)	(2.2)	(2.2)	(2.4)	(2.4)	(3.0)
Nuclear Regulatory Commission (NRC)	0	1	(2.6)	(2.0)	(2.0)	(2.2)	(2.2)	(2.8)
Academia as technical experts (A)	1	1	0	(1.7)	(1.7)	(2.0)	(2.4)	(2.2)
Local Business Firms (LBF)	1	1	0	1	(0.0)	(2.2)	(2.2)	(2.8)
Local Government Agencies (LGA)	1	1	0	1	1	(2.2)	(2.2)	(2.8)
Local Citizens Supporting the facility (LCS)	0	0	0	0	0	0	(2.4)	(2.2)
Local Citizens Opposing the facility (LCO)	-1	0	1	1	1	0	1	(1.7)
National Groups Opposing the facility (NGO)	-1	-1	1	0	0	0	1	1

*Relations are taken from Eq. (1) and are given in and below the diagonal while distances are taken from Eq. (2) and given above the diagonal in parentheses.

groups. As did the citizens against the facility, local citizens supporting the facility solicit support from local government agencies and local business firms thereby neutralizing these actors as participants. The negative relation between the NRC and local citizen opposition groups is expected to develop as a result of the inability of these groups to adequately address their social concerns in the public hearing context. By insisting on concrete questions in the public hearing, the NRC in fact is supporting the interests of the company proposing the nuclear facility so a support relation is indicated between NRC and C.

-----Table 3 About Here-----

The relations in Tables 1, 2, and 3 make explicit the description of the nuclear power issue given in the previous section. Four changes are occurring: (1) Support relations among allies become more dense. The facility's opposition develops citizen groups and elicits support from well organized national groups. The proponents of the facility develop their own citizen groups and exclude the neutralized academic, local business, and local government organizations. (2) Opposition relations between allies of the separate factions become more dense.³⁹ Citizen groups develop opposition relations to the NRC and other local citizen groups supporting the facility. (3) Because of the above changes, distances among allies are decreased. The average distance between those supporting the facility is 1.6 in Table 1 and has decreased to zero in Table 3.⁴⁰ The average distance between the facility's opponents (while not defined as the preissue stage of Table 1) decreases from 1.7 to 1.4 in the latter two tables. (4) Also because of the changes in relations in the issue network, distances between opponents increases. In Table 2, the average distance between the facility's supporters (NRC, C, and LCS) and its opponents (LCO, NGO) is 2.5 while in Table 3 the distance has increased to 3.4.

TABLE 3

THE NUCLEAR POWER ISSUE NETWORK AT A STAGE OF CONFLICT WHEN SUPPORT FOR A FACILITY MOBILIZED*

Participants in the Conflict	C	NRS	A	LBF	LGA	LCS	LCO	NGO
Company proposing the nuclear facility (C)	1	(0.0)	(2.6)	(2.0)	(2.0)	(0.0)	(3.2)	(3.5)
Nuclear Regulatory Commission (NRC)	1	1	(2.6)	(2.0)	(2.0)	(0.0)	(3.2)	(3.5)
Academia as technical experts (A)	1	1	0	(1.7)	(1.7)	(2.6)	(3.0)	(2.6)
Local Business Firms (LBF)	1	1	0	1	(0.0)	(2.0)	(2.8)	(3.2)
Local Government Agencies (LGA)	1	1	0	1	1	(2.0)	(2.8)	(3.2)
Local Citizens Supporting the facility (LCS)	1	1	1	1	1	1	(3.2)	(3.5)
Local Citizens Opposing the facility (LCO)	-1	-1	1	1	1	-1	1	(1.4)
National Groups Opposing the facility (NGO)	-1	-1	1	0	0	-1	1	1

*Relations are taken from Eq. (1) and are given in and below the diagonal while distances are taken from Eq. (2) and given above the diagonal in parentheses.

Although the separation of aspects of conflict escalation into the three separate tables is crude and the numerical illustration is less than precise, the tables serve to demonstrate the two basic social parameters in the form of conflict escalation; mobilization and polarization. Subsequent to a precipitating event, neutrals are "mobilized" into the conflict with internal coordinating relations among allies being developed by partisan leaders who emerge within the opposing factions, and opponents are "polarized" in the sense that opposition relations develop between actors allied to the separate factions. Those actors allied to both sides of the conflict are neutralized (academia, local business, and local government). This mobilization and polarization within the issue network serves to increase the distance between opponents and neutralized actors (thereby "removing" them from the conflict) as the distance among allies is decreased.

The Content of Conflict Escalation in the Nuclear Power Issue

Recalling that the content of conflict is the substance of the communications exchanged among participants in the conflict, the basic social parameter of the content of conflict escalation is generalization. While the content of the issue network can not be stated with precision even equal to that available for stating the form of the network, some overall developmental trends in generalization can be discerned from available evidence on conflicts.

Although a conflict can begin over very specific precipitating events as disagreements, they usually generalize to direct antagonism between opponents. The process shows the following progression. Given any initial disagreement between two actors, the occurrence of the disagreement weakens any existing relation between the opponents thereby inviting other, pre-existing, disagreements to be raised. Further, in their efforts to mobilize neutrals to their cause, opponents have an incentive to expand their original disagreement to

new problems that are perhaps more salient to the neutrals they wish to recruit. These two processes, suggested by Coleman (1957:10), together insure that the specific questions over which opponents disagree will multiply.

As the number of questions at issue multiples, however, the content of the disagreement between opponents generalizes. If for no other reason than simplicity, the many specific problems being debated are replaced with some generalized "type" of problem. Instead of disagreeing over the safety of the emergency core-cooling system, the hazards of thermal pollution, the low level radiation emitted by a reactor, etc., opponents are disagreeing over the utility of nuclear power in general. This is a crucial step. There has been a shift in the content of the communication between opponents and among allies from a disagreement over one or more specific problems to a disagreement over something that does not exist in its own right but rather is an abstraction serving to represent the specific problems. Abstractions themselves become complex and are replaced with still more general abstractions. Disagreement over the utility of nuclear power grows to disagreement over the environment and differences in life styles: business versus the backpacker; corporate power versus the people.⁴¹

Opponents at this point are no longer disagreeing over specific questions but rather they now disagree over abstract beliefs. These beliefs, outside the original dispute, are not easily subject to change. They certainly are not subject to negotiation. By impugning the validity of one another's beliefs, opponents (quite reasonably unwilling to change their beliefs) develop emotional dislike for one another. As put by Simmel (1908:39):

"...the parties' consciousness of being mere representatives of supra-individual claims, of fighting not for themselves but only for a cause, can give the conflict a radicalism and mercilessness which find their analogy in the general behavior of certain very

selfless and very idealistically inclined persons. Because they have no consideration for themselves they have none for others either; they are convinced that they are entitled to make anybody a victim of the idea for which they sacrifice themselves."

One's opponent is no longer someone like yourself who has come to a different interpretation of a given set of facts, he is instead some manner of heretic. The original dispute is now a direct antagonism. It is now that the radical elements in factions can rise as partisan leaders to replace moderate leaders. This is particularly so in the aftermath stage of conflict if conflict has escalated to the direct antagonism state before confrontation occurs.

Still worse, the antagonism between opponents is now self-sustaining. As an abstraction, the disagreement between opponents is less subject to negotiation than to normative role definition. Opponents come to define one another as "types" of individuals differing on "types" of issues. Conflict is now self-sustaining since the opposition relations that developed over the original disagreement now serve to define opponents for one another as stereotypical "types" of individuals. The conflict can not be resolved without redefining the opponents' perceptions of one another. Unfortunately, these opposition relations polarizing the two factions and the support relations among allies within each faction serve to protect stereotypical images of the other faction even where the stereotypes are in error.⁴² The social aspects of conflict have taken over the original dispute. The content of the conflict--the substance of the disagreement between opponents--is now being determined by mobilization and polarization within the issue network. Quite generally, a conflict's form when taken to its extreme becomes its content.

The nuclear power issue is particularly prone to a generalization of the content of conflict. Although the preissue stage of conflict is characterized by economic and legal concerns that can be expressed in specific, concrete terms, the social and health concerns of the opponents of a facility tend

to be more vague. Recall that the stage in conflict after opposition mobilization is for a facility's supporters to activate social relations with equally abstract statements of progress, prosperity, etc. Inherent in the concerns of the opposition groups, in other words, is a higher level of ambiguity than that typifying the preissue stage of communication. This poses serious problems for resolving community conflict in the nuclear power issue since there tend not to be concrete questions over which supporters and opponents differ. Rather they differ over comparatively abstract questions; questions that easily lend themselves to generalization and accordingly to serious social conflict.

III. CONDITIONS AFFECTING COMMUNITY CONFLICT IN THE NUCLEAR POWER ISSUE

Up to this point, I have discussed community conflict in the nuclear power issue as a single process of mobilization, polarization and generalization within an issue network. One might now seek to resolve conflict over a proposed nuclear facility by applying methods intended to reverse these three processes. Such action, however, would be premature. A wealth of evidence is available demonstrating that conflict occurs differently in different communities depending on the characteristics and structure of each community. In some communities conflict can escalate rapidly to a major confrontation while in others it never develops beyond a preissue stage. The use of conflict resolution techniques can accordingly depend on understanding how conflict is likely to escalate in a given community with specific characteristics and structure. My purpose now is to identify community characteristics and aspects of community structure that significantly affect the escalation of conflict in the nuclear power issue. Figure 1 presents the causal framework within which the chapter is organized. Mobilization and polarization within

the issue network result in the generalization of the content of conflict as discussed in the previous chapter while these parameters in the form of conflict escalation are determined by three components of community structure. These components in turn are determined by one another as well as by community characteristics. Since community structure is itself affected by community characteristics, structural determinants of conflict are considered first.

-----Figure 1 About Here-----

Community Structure

There is a well developed literature in sociology and political science on communities as stratified systems of interconnected actors. Individuals and organizations as "actors" are connected to one another by a multitude of different types of relations: friendships, professional associations, business contacts, influences, kinships, etc. These relations do not occur in some random fashion, but rather are ordered or patterned so as to define the "structure" within which the community's residents are stratified. As given in Figure 1, three commonly distinguished components of community structure are the community's "social structure," "power structure" and "political structure." A community's social structure is the differentiation of individuals and groups in terms of the social, economic and deference relations connecting them. The usual measure of social structure in comparative analyses concern differentiation; e.g., the mixture of races or ethnicities in the community, the absence of community-wide voluntary associations, the lack of linkages among organizations in the community, etc.⁴³ A community's power structure is the differentiation of individuals and groups in terms of their relative ability to transform valuable resources into influence over others in the community. Powerful actors are those who can realize goals despite constraint from others in the community. The usual measures of power structure in comparative analyses concern the centralization of power

FIGURE 1. DETERMINANTS OF COMMUNITY CONFLICT

in the hands of an "elite" set of individuals and groups; e.g., the concentration of the reputation for power in the hands of a few individuals or groups, the occupation of the most important positions in the community by the same few individuals, the prominence of the same few individuals or groups in all major decisions reached in the community.⁴⁴ Finally, a community's political structure, or formal decision-making structure, is the differentiation of individuals in terms of their legal authority to determine community decisions. The usual measure of political structure in comparative analyses concerns the centralization of authority in the hands of a few key positions shielded from citizen demands; e.g., the level of "reform government" in a community as indicated by nonpartisan elections, at-large rather than district representation in the city council, and a city manager rather than an elected mayor.⁴⁵ The higher the level of reform government, then the more isolated legal authority for decision-making is from the average citizen; decision-making being more administrative than political.

These three components are interdependent.⁴⁶ Centralization tends to occur simultaneously in the political and power structure of a community; reform cities tending to have a small number of powerful actors in the city. Centralization in the power or political structure tends not to occur with differentiation in the social structure; a small number of powerful actors being unlikely in a community with conflicting voluntary associations for expressing partisan citizen demands. The two basic social parameters for the form of conflict escalation are affected quite differently by community structure.

Depending to a large extent on Olson's (1965:5-52) theory of collective action, a premise in much of the work on mobilization is that existing social relations between individuals to be mobilized are necessary to offset the natural tendency for each individual to let others mobilize to provide him

with whatever good is being sought.⁴⁷ In other words, individuals and groups will have a natural inertia against being mobilized. However, this inertia is overcome by existing social relations. An individual becomes involved in his friend's disputes. An organization becomes involved in its members' disputes. In a differentiated social structure (where groups of individuals are segregated by existing stratification), mobilization should be more difficult than would be the case in an undifferentiated structure (where individuals have social relations to most other individuals). In a centralized power or political structure (where the powerful are insulated from citizen demands), mobilization of citizens should be more difficult than would be the case in a decentralized structure (where the powerful are related to clear constituencies). Evidence bears these ideas out in that mobilization tends to be less likely, comparatively speaking, in communities with differentiated social structure, centralized power structure, or centralized political structure.⁴⁸

Just the opposite occurs when the polarization parameter is considered. While existing relations facilitate mobilization, they inhibit polarization. An individual is unlikely to support a nuclear facility if his long standing friends are opposed to it. In fact, this is the basis for neutralizing actors in the conflict. An individual who finds some of his friends in support and some in opposition to a proposed facility will simply keep out of the conflict. A group or organization that finds half its membership in support and half in opposition to a proposed facility will simply be neutral in the conflict. This can be stated in stronger terms. Not only does the existence of relations between potential opponents have a negative effect on polarization in conflict, the absence of such relations (or worse, the existence of long standing opposition relations) facilitates polarization.⁴⁹ Two factions that are strangers or have been in opposition previously, in comparison to two long

standing friends, are most likely to become polarized in a conflict that puts them against one another.⁵⁰ Note that this effect insures a feedback effect from polarization; the development of initial opposition relations between two factions in an issue network leads to yet more intense opposition relations.⁵¹ Since differentiation in a community's social structure, centralization of its power structure, and centralization of its political structure entail the decrease in relations among citizens, it is not surprising to find that such communities, again speaking comparatively, tend to be more likely to be polarized in conflict.⁵²

Community Characteristics

While the structure of a community is amenable to description in case studies of single communities, the large volume of data required is difficult to obtain when many communities are being compared. In response to this problem, more easily obtained census data as community characteristics are used as indicators of features of the community structure they cause (cf. Figure 1) and in some instances have been used in place of structural information to classify communities into types.⁵³ Community characteristics in a general sense focus on the concept of "urbanization" as reflected in population size, population density (citizens per square mile), population heterogeneity as the variability of types of citizens (mixtures of ethnicities, races, occupations, level of education, levels of income, etc.), and the age of the community as a measure of the length of time a community has had to become urban as well as the probable scope of functions the community government administers. These four community characteristics tend to occur together (older cities tending to be large, dense and heterogeneous) and jointly define what it means for a community to be urban following Wirth's (1938) classic journalistic account.⁵⁴

All four characteristics cause differentiation in a community's social structure. With population growth, citizens are separated from one another in the sense that not all individuals have relations with all other individuals. Fischer (1975) reviews literature demonstrating that population density leads to the development of separate subcultures in a community.⁵⁵ Given the fact that social relations tend to occur among socially similar individuals, measures of heterogeneity such as percent foreign born, percent nonwhite, variation in annual incomes, or economic diversification can be used as direct (although partial) measures of differentiation in a community's social structure.⁵⁶ Since these three characteristics increase over time, older communities are more differentiated than recently incorporated communities.

The four characteristics have just the opposite effect on the centralization of a community's power and political structure. More urbanized communities tend to have decentralized power and political structures. With the growth of the federal government, recently incorporated community governments have to serve fewer services to their citizens than did older communities. In comparison to new communities, old communities will have multiple city bureaucracies performing a wide range of citizen services and thereby constituting multiple centers of power and decision-making.⁵⁷ With increasing size, density and heterogeneity, subcultures will develop within a community thereby creating political constituencies each with their unique partisan demands on the community power and decision-making structure so that centralization is unlikely.⁵⁸

-----Figure 2 About Here-----

Figure 2 summarizes the causal influences that have been discussed up to this point. Community age, population size, population density, and popula-

FIGURE 2. A CAUSAL MODEL OF THE CONDITIONS AFFECTING COMMUNITY CONFLICT

tion heterogeneity together result in urbanization. Urbanization leads to increasing differentiation in the community's social structure while preventing centralization in the community's power and political structure. Mobilization in community conflict is decreasingly likely with centralization in the community's power and political structure and differentiation of the social structure. In contrast, polarization is increasingly likely under these same conditions.

Figure 2 makes clear the two manners in which community characteristics affect community conflict.⁵⁹ Urbanization works to increase differentiation in a community's social structure which in turn decreases the likelihood of mobilization for conflict and increases the likelihood of polarization in conflict. At the same time, however, urbanization works to prevent centralization in a community's power and political structure both of which in turn decreases the likelihood of mobilization and increase the likelihood of polarization. In short, community characteristics of urbanization serve both to increase and to decrease the escalation of community conflict! The actual associations between the four community characteristics and conflict escalation in a particular issue will depend on the relative importance of the two manners in which urbanization affects mobilization and polarization. In the community conflicts over water fluoridation, for example, centralization of a community's political structure as reflected in a reform government was the most significant predictor of conflict over fluoridation and accordingly a rejection of water fluoridation by the community. Since urbanization prevents the centralization of a community's political structure, it is not surprising to find that size, density, heterogeneity and age are all negatively associated with community conflict over water fluoridation.⁶⁰ In contrast, the severity of rioting during the 1960's in particular communities

is predicted by the degree of polarization of racial groups as indicated by segregation and relative deprivation. These conditions being features of differentiation in community social structure and increasing with community urbanization, it is not surprising to find that size, density, heterogeneity and age are all positively associated with severity of race riots.⁶¹

The Nuclear Power Issue

The description of community conflict in Section II allows the above propositions to be more explicitly stated for the nuclear power issue. While the absence of systematic comparative research imposes a severe constraint on what can be stated with certainty, some ostensibly reliable inferences can be made. A first step is to link the nuclear power issue with other issues that have been extensively studied. Particularly similar to the nuclear power issue is the now well researched conflict over water fluoridation. In both the nuclear power issue and the water fluoridation issue the public is concerned about possible dangers of a technical question it does not understand. Academia is in both cases neutralized in the sense that while most technical expert opinion supports both nuclear power and water fluoridation, eminently qualified expert opinion can also be found to oppose both owing to the possible dangers each entails. Local government agencies tend to be in favor of both water fluoridation and nuclear power; health and welfare agencies for the former, zoning and commerce agencies for the latter. While initial support for water fluoridation is solicited on the grounds of specific economic (it is inexpensive), health (it decreases tooth cavities in children) and legal (it involves the legality of forcing a water additive on all citizens in a community) questions and initial support for a nuclear facility is solicited on the grounds of economic (it will provide inexpensive power and will increase the local tax base) and legal (it must meet safety and environmental standards) questions, opposition against both

is mobilized on a social basis using more abstract concerns over health and possible dangers (water fluoridation being imposed on everyone and potentially causing birth defects in children; nuclear power potentially exposing residents to radiation). The major differences between the issues seem to be the considerable differences in the potential danger of the two and the more explicit economic interests of supporters in the nuclear power issue. While the former difference should only make the nuclear power issue more prone to conflict escalation, the latter difference should make the social and power structure of a community more important in the nuclear power issue than in the water fluoridation issue.

Consider first the probable polarization in conflict occurring in communities with centralized political structures. Recall that citizens opposed to a facility obtain support most often from elected local officials while a facility's supporters obtain support from local government agencies. Centralization in the political structure is characterized by reformist features that isolate legal decision-making from citizen demands so as to make a city more similar to an administrative bureaucracy than an arena for political contest. There, local governments will be most favorable to establishing a nuclear facility in the preissue stage when the community political structure is centralized. Unfortunately, it is in precisely these communities that the most extreme polarization will occur in the nuclear power issue. As in the fluoridation issue, it is to be expected that the most intense conflict over nuclear power will occur in communities with centralized political structures (i.e., reformist governments) and accordingly in nonurban communities (as reflected in low population size, low population density, low population heterogeneity, and municipal youth).

In combination with the form of a community's social and power structure, the distribution of the community's economic and social elite through the

the structure are important determinants of conflict in the nuclear power issue. Recall that support for a facility is based predominantly on economic interests. Opposition based on environmental concerns is in contrast likely to stem from social elites as the highly educated, politically liberal citizens. Where in the structure of a community does one observe the community's industrialists, bankers, business managers, etc.? Where in the structure does one observe the community's social notables; doctors, professors, prestigious old families, etc.? If the social elites are dominant in a centralized power structure, then one could expect vocal opposition to a nuclear facility even in the preissue stage. If the economic elite are dominant in a centralized power structure, then one could expect vocal support for a nuclear facility since economic interests would be prominent in the community. Power is a tenuous quality, however, and the more concentrated the economic elite are in a few sectors of the community (either in a central position, a peripheral position, or simply differentiated apart from the rest of the community), then the fewer social relations there will be between the economic elites and others in the community; particularly the social elites. When the economic elites are segregated in this manner--as is to be expected with increasing urbanization--polarization will be most extreme over a proposed nuclear facility since there are no existing social relations between the facility's probable supporters and opponents. Further, the mobilization of opposition to a facility is simplified since the economic elites supporting the facility can be treated as a common enemy to the individuals and groups that social activists are trying to mobilize.⁶² Therefore, local citizen support for a proposed nuclear facility will be most vocal in the preissue stage when the economic elite dominate their community's power structure, however, to the extent that the economic elite are segregated from most citizens in the

community--particularly the social elite--there will be extreme mobilization and polarization in the nuclear power issue. Since urbanization tends to separate the economic elite from the average citizen, the most intense conflict in the nuclear power issue should occur in relatively urban communities.

This appears at first glance to contradict the earlier proposition that urbanization decreases the potential for conflict. In fact, it does not. Urbanization decreases the potential for conflict in a community only by decreasing the likelihood of centralized authority in the community. Accordingly, where such a political structure is absent, urbanization will increase a community's potential for conflict by increasing the likelihood of segregated--and therefore easily polarized--economic and social "neighborhoods" within a community.

Note that this discussion presents a counter-intuitive observation relevant to locating nuclear facilities. Where citizen opposition is vocal in a preissue stage (social elite are dominant), licensing problems can be anticipated as would be expected. This might lead to siting in communities where local citizen and government support for a nuclear facility is enthusiastic in the preissue stage. Such enthusiastic support, however, is most likely in communities where the economic elite are dominant and/or the political structure is centralized. It is in just such communities that one can expect the most extreme conflict escalation and consequent drawn-out licensing problems.

Under the assumption that conflict in the nuclear power issue will occur whenever it can occur, the above discussion indicates that the least intense conflict over a nuclear facility will occur in small, sparsely populated homogeneous (in the sense of there being no clear economic or social elite groups), young communities with decentralized political structure (in the sense of having a nonreform government).

The Issue Network Implicit in Community Structure

Different communities clearly have different potential for becoming embroiled in conflict over a nuclear facility. One can imagine a continuum ranging at one end with communities which have a high potential for conflict in the nuclear power issue to the other end with communities which have a low potential for such conflict. The above discussion has reviewed research on community conflict and decision-making so as to locate communities on this continuum in terms of their social, power and political structure and indirectly in terms of their urbanization characteristics. In fact, the above discussion has indirectly located communities on a continuum of conflict potential in terms of the extent to which existing community structure resembles the polarized issue network given in Table 3.

-----Table 4 About Here-----

Table 4 makes this assertion more explicit by comparing the issue networks implicit in communities which have a high versus a low potential for conflict in the nuclear power issue. A community with high potential for such conflict has a centralized political structure so local government agencies are isolated from other residents of a community. Note in the bottom half of Table 4, LGA have null relations with local business firms (LBF) and local citizens (LCS, LCO). Further, a community with high conflict has a differentiated social structure that segregates economic elites and social elites; the former tending to support a nuclear facility and the latter tending to oppose it. Note in in the bottom half of Table 4, local citizens supporting a facility (the economic elite, LCS) are both internally organized and supportive of local business firms (LBF). Local citizens opposing the facility (the social elite, LCO) are both internally organized and have null relations to all other sectors of the community. When a

TABLE 4
THE ISSUE NETWORK IMPLICIT IN COMMUNITY STRUCTURE*

FOR A COMMUNITY WITH LOW CONFLICT POTENTIAL [†]					
Local Participants in the Conflict	C	LBF	LGA	LCS	LCO
Company Proposing Facility	1	(1.4)	(1.4)	(1.4)	(2.0)
Local Business Firms	1	1	(0.0)	(0.0)	(1.4)
Local Government Agencies	1	1	1	(0.0)	(1.4)
Local Citizens in Support	1	1	1	1	(1.4)
Local Citizens in Opposition	-1	1	1	1	1

FOR A COMMUNITY WITH HIGH CONFLICT POTENTIAL [‡]					
Local Participants in the Conflict	C	LBF	LGA	LCS	LCO
Company Proposing Facility	1	(1.4)	(1.7)	(1.4)	(2.6)
Local Business Firms	1	1	(1.7)	(0.0)	(2.2)
Local Government & Agencies	1	0	1	(1.7)	(2.0)
Local Citizens in Support	1	1	0	1	(2.2)
Local Citizens in Opposition	-1	0	0	0	1

*These tables are presented in the same format as Tables 1, 2, and 3 with distances above the diagonal as computed from relations using Eq. (2) and relations on and below the diagonal as given in Eq. (1).

[†]This is a young, small sparsely populated community that is homogenous (in the sense of having no clear economic or social elite groups) with a decentralized political structure (in the sense of having a non-reform government).

[‡]This is an old, large, densely populated community that is heterogeneous (in the sense of having clearly segregated economic and social elite groups) with a centralized political structure (in the sense of having a reform government).

community proposes a nuclear facility in this community, support relations will occur between the company (C) and some local citizens, local business firms, and local government while an opposition relation will occur with some other local citizens. A community with low potential for conflict in the nuclear power issue has a different structure as is given in the upper half of Table 4. Support relations exist among all groups in the community or at least there are no clear cleavages between the four groups. Again, support relations exist between the company proposing a facility and local citizens, local business and local government, while an opposition relation occurs between the company and some other local citizens.

The lower half of Table 4 is more similar to the polarized issue network in Table 3 than is the upper half of Table 4. In other words, the structure of a community with a high potential for conflict in the nuclear power issue is more similar to a polarized issue network in such conflict than is the structure of a community with low potential for conflict in the nuclear power issue. In a high conflict potential community, there are null relations between the probable combatants in the nuclear issue. When a nuclear facility is proposed, the community is quickly split into factions. In a community with low conflict potential, on the other hand, the existing support relations between probable combatants lessens the extent to which factions are cut off from each other. Note that the distance between local citizens opposing a facility and the company proposing it (C versus LCO) is 2.0 in the low conflict potential community while it is 2.6 in the high conflict potential community. Further, note that the average distance between the local citizens opposing the facility and the three groups likely to initially support the facility (LCO versus LBF, LGA, LCS) is 1.4 in the low conflict potential community while it is 2.1 in the high conflict potential community. In

short, communities prone to conflict escalation in the nuclear power issue are those in which an already polarized issue network is implicit in the structure of the community.

IV. SUMMARY

My purpose in this discussion has been to demonstrate that a frankly structural, or network, approach to the analysis of community decision-making allows an observer to anticipate community response to specific policies. The nuclear power issue provided illustration. Hypotheses have been derived that predict what types of communities can be expected to become embroiled in conflict over siting a nuclear facility and the process that conflict escalation will follow. In closing, let me summarize what has been proposed.

Section II is concerned with outlining a composite picture--quite frankly tentative--of how the conflict in the nuclear power issue escalates outside the public hearing and is a distinctly local phenomenon. The issue is discussed in terms of two types of parameters in community conflict; form versus content of an issue network. The basic social parameters in the form of conflict escalation are mobilization of support relations within the issue network by each faction and polarization between factions by creating opposition relations in the issue network. As a result of these processes, the distance among allies in each faction decreases with conflict escalation and the distance between the factions increases. The basic social parameter in the content of conflict escalation is the generalization, or increasing abstraction, of the points of disagreement between opposing factions. Once past a certain point of escalation, these social parameters take over the conflict in the sense that the conflict has a self-sustaining

life of its own quite apart from the original questions over which the issue began.

Section III extends the analysis beyond a single community to a comparison of separate communities. What are the community characteristics and features of community structure that determine the three social parameters of conflict escalation? Since the generalization of content is determined by the mobilization and polarization of form within an issue network, the focus is on the determinants of changes in form as conflict escalates. Three components of community structure are distinguished; social, power and political. Social structure has been studied by community researchers in terms of differentiation while the power and political structure of communities have been studied in terms of centralization. Community characteristics defining the urbanization of a community have been studied in terms of population size, population density, population heterogeneity and the age of the community. These characteristics serve to increase differentiation in the social structure and prevent centralization in the power and political structure of a community. Intense conflict is most likely when the social structure is differentiated and the power and political structure is centralized. In the case of the nuclear power issue, these general propositions were used to conclude that the least intense conflict over siting a nuclear facility would occur in communities expressing neither intense support or opposition to the facility in the preissue stage where the community was small, sparsely populated, homogeneous (in the sense of there being no clear economic or social elite groups), young, and having a decentralized political structure (in the sense of having a nonreform government). The key determinant of a particular community's conflict potential is the extent to which there is a polarized issue network implicit in the community's structure.

FOOTNOTES

¹In corroboration of this common sense perception, Ebbin and Kasper (1974:19) cite a survey conducted in 1972 showing that 60% of adults associate the word "nuclear" with violence/anxiety and 83% associate the word "atomic" with violence/anxiety.

²Bibliographies of literature on the nuclear power issue are given in Ebbins and Kasper (1974:Appendix C) and Burt et al. (1978:Chp 5).

³These points are summarized in a study jointly authored by a group calling themselves the Nuclear Energy Policy Group (1977:210-211, 240-242, 266-267). Other discussions supporting nuclear power facilities are cited in Burt et al. (1978:1).

⁴There is an enormous literature opposing nuclear power facilities that is intended to appeal both to professional and lay audiences (see Burt et al., 1978:1-2, for several citations).

⁵As early as 1970, the Joint Committee on Atomic Energy complained to the Congress (quoted from Lewis, 1972:3); "The Committee has noted with concern in the past year the increased public opposition, not a little of it wholly unreasoning, to the construction of all electrical generating sources and their transmission systems." In a recent campaign in Vermont to prohibit the establishment of nuclear power plants, a spokesman for the Vermont Yankee nuclear power plant was quoted in the New York Times (4/3/77) as saying: "Considering the wording of the proposals and the misinformation and scare tactics circulated in the last few weeks, we are not surprised at the result of the vote." Costaglioli (1971) similarly critiques mass media coverage of the nuclear power issue.

⁶The material upon which I have based this composite picture of the nuclear power issue is quite diverse. Details on stages in establishing a waste repository are taken from a progress report by the Office of Waste Isolation, Union Carbide, Nuclear Division (1976:7-10). The licensing process and public participation in the hearings is described succinctly in the annual report of the NRC (1976:19-25, 197-217) and Ebbin and Kasper's (1974:33-58) description of AEC hearings. The remainder of the Ebbin and Kasper monograph contains detailed discussion of the contents of three particular hearings. Equal to the Ebbin and Kasper monograph is Nelkin's (1971) description of the actors and questions involved in the controversy over establishing a nuclear power plant

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in Cayuga Lake, NY. Less extensive descriptions of aspects of the nuclear power issue are cited in Burt et al. (1978:3).

⁷In order to separate the regulatory and development roles of the Atomic Energy Commission, the Commission was replaced in 1975 with the Nuclear Regulatory Commission (NRC) and the supervisor of nuclear facilities and the Energy Research and Development Administration (ERDA) as the developer of nuclear technology. While the agencies involved in the nuclear power issue are therefore different before versus after 1975, the licensing process at all times has been in accordance with the Atomic Energy Act so I have not distinguished controversies occurring under the Nuclear Regulatory Commission. Where the change in administration has some consequence a note to that effect is made.

⁸In response to this point, there are increasing numbers of consolidated interventions where multiple intervenors pool their resources to make a common argument in a hearing (Ebbin and Kasper, 1974:41).

⁹Ebbin and Kasper (1974:122-138) describe the evolution of the rulemaking hearings on the emergency core-cooling system for nuclear power plants. In fact there are six types of hearings in which the public can participate under the administration of the NRC; rulemaking proceedings, manufacturing license proceedings, construction permit proceedings, operating license proceedings, materials license proceedings, and show cause proceedings (described in the NRC annual report, 1976:204). Nevertheless, most participation occurs in the hearings for a particular facility and the rulemaking proceedings that are offshoots of licensing particular facilities.

¹⁰The ASLB's decision is subject to appeal to an Atomic Safety and Licensing Appeal Board (ASLAB) and could ultimately go to the NRC itself for decision. Additionally, the law provides for appeal beyond the NRC in the Federal Courts. Perhaps the best known of the last type of appeals is the Calvert Cliffs decision that forced the AEC to consider environmental issues in establishing nuclear facilities. A significant point here is that a favorable decision by the ASLB allows the NRC to grant a Limited Work Authorization to the company proposing a facility in advance of a final decision of the license. Thus, work can begin on a facility even while controversy over the facility mounts.

¹¹While the public hearing is not mandatory for an operating license, it will be held if requested by affected members of the public or by the NRC.

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¹³The role of State agencies in the nuclear power issue is unclear. While state agencies may occasionally appear as intervenors if a proposed facility affects two or more states (e.g., the Vermont Yankee plant hearings where the proposed plant discharged into the Connecticut River thereby affecting Vermont, New Hampshire and Massachusetts), states are increasingly passing their own environmental laws comparable to the National Environmental Protection Act so as to impose their own restriction on environmental pollution (Haskell, 1971; Hill, 1976).

¹⁴Before the AEC was dismantled into the current two agencies dealing with nuclear power (see footnote seven), there was a clear conflict of interest here. The federal regulation of licensing facilities was confounded with the promotion of such facilities (see Orlans, 1967, for an extensive discussion of the relations among the AEC, private industry and academia). However, with the creation of the NRC, this separation seems unambiguous so that I have treated the initial relation between the NRC and a company proposing a nuclear facility as one of neutral insistence on the company's conformity to existing legal codes.

¹⁵An increased tax base is often cited by citizens as a reason for supporting a proposed facility (e.g., Nelkin, 1971; Ebbins and Kasper, 1974, Shenfeld 1974) and in some cases support above and beyond taxes is offered (e.g., the Vermont Yankee power plant constructed a new library, town hall and community swimming pool for the residents in Vernon; Vermont). It is not surprising to find a company proposing a nuclear facility named by the local Chamber of Commerce as "company of the year" (Nelkin, 1971:34).

¹⁶Most utilities possess a right of eminent domain to condemn any property they require for expansion. This legal basis as well as the link between local business and government agencies tends to result in local government agency support for the efforts of the company proposing a nuclear facility--at least in this preissue stage of conflict (e.g., See Novick, 1968:37; Nelkin, 1971:34).

¹⁷The issues raised by citizen groups are scattered through the literature cited in Burt et al. (1978:1-2). Nelkin (1971:79-108) provides detailed discussion of the development of salient issues in one controversy, although the opposition in this case involved an unusually professional group. A comprehensive survey could be accomplished by taking an inventory of issues raised in the petitions to intervene in public hearings. Ebbins and Kasper (1974:59-101) provide some specific questions of concern to intervenors against proposed facilities.

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¹³The role of State agencies in the nuclear power issue is unclear. While state agencies may occasionally appear as intervenors if a proposed facility affects two or more states (e.g., the Vermont Yankee plant hearings where the proposed plant discharged into the Connecticut River thereby affecting Vermont, New Hampshire and Massachusetts), states are increasingly passing their own environmental laws comparable to the National Environmental Protection Act so as to impose their own restriction on environmental pollution (Haskell, 1971; Hill, 1976).

¹⁴Before the AEC was dismantled into the current two agencies dealing with nuclear power (see footnote seven), there was a clear conflict of interest here. The federal regulation of licensing facilities was confounded with the promotion of such facilities (see Orlans, 1967, for an extensive discussion of the relations among the AEC, private industry and academia). However, with the creation of the NRC, this separation seems unambiguous so that I have treated the initial relation between the NRC and a company proposing a nuclear facility as one of neutral insistence on the company's conformity to existing legal codes.

¹⁵An increased tax base is often cited by citizens as a reason for supporting a proposed facility (e.g., Nelkin, 1971; Ebbins and Kasper, 1974, Shenfeld 1974) and in some cases support above and beyond taxes is offered (e.g., the Vermont Yankee power plant constructed a new library, town hall and community swimming pool for the residents in Vernon, Vermont). It is not surprising to find a company proposing a nuclear facility named by the local Chamber of Commerce as "company of the year" (Nelkin, 1971:34).

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¹⁸In the Bodega Head controversy, for example, the safety issue only arose after the environmental questions had long been the basis for opposition (Novick, 1968:37-38). In the Cayuga Lake controversy, thermal pollution was a prime question since the lake had a delicate temperature structure that would be upset by the thermal discharge of a nuclear power plant (Nelkin, 1971:79-98). An ongoing problem with nuclear power plants along the Hudson River has been the thermal discharge killing the popular striped bass (e.g., Boyle, 1969, 1971).

¹⁹In addition to opposition arising in response to the necessary announcements of public hearings, the announcement of a particular area as a potential site for a nuclear facility can generate opposition (e.g., Faber, 1976a, 1976b). Also there is an ongoing incentive for opposition given the retroactive nature of regulation over nuclear facilities. Every facility is subject not only to current legal decisions but all future ones as well. This means that facilities built and operating can be forced to reduce their output while modifications are made to bring them into compliance with new regulations (e.g., the Vernon, Vermont plant, New York Times, 7/23/76).

²⁰Information on this early stage of opposition is at best sketchy. The use of social support relations seems common in available descriptions, however. For example, reacting to his perception of the potential thermal pollution problems for Cayuga Lake, a professor at Cornell called together a group of his colleagues to issue a statement and subsequently called a community meeting that evolved into the Citizens Committee to save Cayuga Lake and eventually defeated the proposed plant (Nelkin, 1971:40-58). The controversy over the Bodega Head power plant began with a woman refusing to sell her land to the utility proposing the facility. She solicited aid from local residents and groups familiar to her (claiming; "I am not asking for your sympathy. I am asking for justice."), and this aid developed into the Northern California Association to Preserve Bodega Head run by a staff member of the Sierra Club (Novick, 1968:34-44; Holden and Herrera, 1971:192-203).

²¹The characteristics of "environmentalists" are discussed in articles intended to appeal to a wide variety of audiences (e.g., Swan, 1970; Meier, 1971; Tognacci et al., 1972; Koenig, 1975; Sills, 1975; Trigg et al., 1976).

²²For example, in reaction to opposition to the proposed power plants in Midland, Michigan, about fifty persons representing "trades, professions, businesses, organizations, and industries" banded together under the chair-

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manship of the Senior Minister of the First Methodist Church of Midland to form the Midland Nuclear Power Committee (Ebbin and Kasper, 1974:62). In reaction to the effective opposition to the proposed power plant in Cayuga Lake by the Citizens Committee to Save Cayuga Lake, thirty-five persons representing local business interests banded together to form the Citizens Committee to Save Bell Station and circulate a petition reading; "We the undersigned of the area involved, having faith in the Electric and Gas Corporation, its employees, the Federal and State regulatory agencies governing licensing of nuclear-powered generating stations, pledge our support to the planned project of Bell Station." (Nelkin, 1971:76-77).

²³Writing from the viewpoint of the opposition to nuclear facilities, Lewis (1972:112) suggests; "Under the administrative philosophy, dissent was equated with disruption. Dissenters were 'crackpots.' They were in the AEC-industry view 'unscientific, rabble rousers, publicity seekers, alarmist, fanatics.'" While using more innocuous adjectives, the quotes in footnote five together with limited survey work (e.g., Kefalas and Carroll, 1976) suggests that such perceptions of environmental opposition to nuclear facilities exist. For their part, the nuclear power opponents have equally negative stereotypes of an agency-industry "establishment" conspiring to spread nuclear power (e.g., Cowan, 1974; Burnham, 1974) so that even the general public seems not to trust the ability of industry or the government to resolve environmental problems (e.g., Althoff and Grieg, 1974).

²⁴This is illustrated by complaints that quantitative cost-benefit analyses in environmental impact statements are biased against capturing aesthetic concerns (e.g., Kaufman, 1972; Bernstein et al., 1973; Ebbin and Kasper, 1974; Babcock, 1975; Ashby, 1976).

²⁵A seemingly promising approach to the nuclear power issue is in terms of citizens alienated from a technological and impersonal society lashing back at it as might be expected in a mass society. Certainly, citizens feel powerless in confrontation with industry and the federal bureaucracy. This argument was advanced by some as a promising approach to understanding why citizens rose in opposition to the fluoridation of water. For the same reasons that the alienation approach was dismissed by Crain et al. (1969:31-51) in the study of conflict over fluoridation, it would seem erroneous here. The alienation hypothesis is ambiguous about measuring levels of alienation underlying conflict in a community, tends to equate a rejection of some administration

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proposal and an extremist, alienated ideology independent of the adequacy of the proposal, and fails to consider the social context of conflict. As discussed here and in Section III, community structure plays a significant role in the course a conflict is likely to take. The feelings of alienation manifested in the obstructionist and dilatory tactics adopted by citizens in the public hearings are rooted in a social organization not apparent in the hearing. The road to resolving obfuscationist tactics in the hearing process lies in the resolution of the more general conflict in the community outside the hearing

²⁶The common form of such action is occupying the construction site for a proposed facility so construction can not proceed. First begun in Europe (Fernex, 1975; Coppock, 1977), this strategy has begun to be used in the United States; the most notable example being the recent confrontation in New Hampshire over the Seabrook plant (Kifner, 1977).

²⁷The separation of form and content in relations is most often attributed to Simmel (1917:40-57). These two types of concepts in community conflict have been discussed by Coleman (1957:9-14) as changes in the social organization of a community and changes in the issues at question in the conflict. Coleman's discussion applies early metaphors discussed by Simmel (1908).

²⁸To be more specific, I am not concerned with the analysis of inherent tendencies for conflict in a differentiated social system (e.g., Dahrndorf, 1959; Oberschall, 1973:1-84; Collins, 1975) nor the functions of conflict in a system for maintaining the system (e.g., Coser, 1956,1967), nor efforts to bring these two streams of work together (e.g., Turner, 1975a, 1975b). A consideration of conditions that exacerbate conflict escalation--and thus a partial consideration of its causes--is presented in Section III.

²⁹As proposed by Walton (1969:76); "We refer to these stimuli as triggering events, and propose that they can have their effect either by increasing the magnitude or salience of the issues in the conflict or by lowering one of the barriers to action." Similar attention to precipitating events in conflict reference to environmental issues, Downs (1972) discusses an "issue-attention cycle" in which "alarmed discovery and euphoric enthusiasm" result from "some dramatic series of events."

³⁰The precipitating event then involves fear of the announced innovation imposing unwarranted costs on the individual coupled with a feeling of being

able to do something about it, the last of the three factors being demonstrated to be a significant precipitant in the formation of coalitions (e.g., Gamson, 1962; Chertkoff, 1966; Caplow, 1968).

³¹For example, Meltsner (1971) describes three strategies officials use in "public avoidance"; 1) consensual where officials perceive a consensus so the public can be ignored, 2) negotiatory where officials discuss proposals with cooperative citizens on a face-to-face basis before implementing decisions, and 3) anticipatory where officials anticipate public reaction so as to avoid having to negotiate. Similar ideas are presented by Bachrach and Baratz (1963) and Wolfinger (1971).

³²For a discussion of problems in analyzing actions in the preissue stage see the exchange between Wolfinger (1971a, 1971b) and Frey (1971). There have been two methods used to analyze preissue actions. One method is to do a case study analysis of the actions leading up to an actual conflict. For example, Bachrach and Baratz (1970:67-103) discuss strategies employed by city officials to prevent race riots from occurring in Baltimore; and Crenson (1971) discusses strategies employed by the steel industry to keep air pollution from becoming an issue in Gary, Indiana. A second method is to focus on one type of issue in many communities and determine why the issue arises into conflict in some communities but not others. Crenson (1971) and Bridgeland and Sofranko (1975) illustrate this approach in analyzing the determinants of community action over air pollution.

³³The bulk of the literature on community issues is concerned with this explicit issue stage (e.g., see reviews by Bonjean et al., 1971; Clark, 1968a, 1974a, 1975a). This topic is addressed in Section III.

³⁴More detailed distinctions of actions within the prefrontation stage of escalation are occasionally given (e.g., Sanders, 1961; Rogers and Shoemaker, 1971:268-297; Downs, 1972).

³⁵Brinton (1965:148-175) remains a classic discussion of the ouster of moderate leaders of radical leaders. Coleman (1957:14) discusses this process as "Gresham's Law of Conflict" under which; "the harmful and dangerous elements drive out those which would keep the conflict within bounds." Gamson (1975) specifically addresses the strategies of protest groups who feel that they are being excluded from a "meaningful" input into the political decision-making process. Both sides in such protests seem more willing to use violence in achieving their ends.

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³⁶Borrowing from recent developments in network analysis, I have taken a topological approach here to represent the issue network. Citations to further reading, as well as detailed and applied discussion of Eqs. (1) and (2) are given in Burt (1976, 1977a, 1977b). Coppock (1977) uses topological concepts to analyze the perception of public opinion in the nuclear power issue by decision-makers. Breiger (1978) uses a similarly topological approach to specify alternative power elite structures. Davis and Weinbaum (1969) innovatively use published case studies to trace issue networks over time in metropolitan decision-making.

³⁷A similar sentiment is reflected in Laumann and Pappi's (1976:163-172) analyses of "types" of community issues in terms of the different functional sectors of the community activated in support and opposition for each type of issue.

³⁸Only half a table of distances and half a table of relations are needed since both qualities are symmetric ($d_{ij} = d_{ji}$ and $z_{ij} = z_{ji}$). Also, distances between each actor and itself (the diagonal elements in the table, d_{jj}) need not be presented since they will always equal zero according to Eq. (2).

³⁹As corroboration of these tendencies for support and opposition relations to become denser as conflict escalates, Davis and Weinbaum (1969:43,99) find that the most intense interaction among participants in decision-making tends to occur in the final stages of decision-making.

⁴⁰In the preissue stage (Table 1), the company (C), Nuclear Regulatory Commission (NRC), academia (A), local business firms (LBF), and local government agencies (LGA) and local citizens supporting the facility (LCS) can be viewed as supporters, but in the subsequent two tables representing the stages when an issue is explicit, academic and local corporate support is neutralized so that only C, NRC, and LCS remain as supporters (in practice if not intent).

⁴¹The environmental conservation question now can be easily romanticized as a confrontation between the righteous and the foolish; both economic (e.g., Meier, 1971) and aesthetic (e.g., Young, 1973; Schell, 1976) interests claiming righteousness.

⁴²The classic statements here are Sherif (1935) and Festinger et al. (1950). More recent support is given in Hornstein and Johnson (1966), Luttbeg and Zeigler (1966), Turner (1972), Finifter (1974), Ross et al. (1975), and Stein (1976).

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⁴³It is important here to distinguish how social structure is conceptualized and analyzed within a community as a system of actors from measuring social structure across separate communities. The latter involves serious compromises in order to capture the former. Burt (1977a, 1977b) provides a general conception of social structure in terms of patterns of relations as "role-sets" among actors occupying "statuses" within a community as a system. References to readings on specific features of social structure are given there. Since relations between individuals and groups tend to be patterned by the social and economic attributes of actors, relations tending to occur between actors with similar social and economic attributes (e.g., see Laumann, 1966, 1973, as well as the experimental work cited in footnote 48 on cooperation and liking resulting from perceived similarity between persons), much of the comparative work on community social structure measures differentiation in terms of mixtures of social and economic attributes of citizens (e.g., Aiken, 1969; Walton, 1970; Turk, 1977). Since resources in a community are usually concentrated in corporations, much recent work has measured differentiation in a community's social structure in terms of the density of linkages among organizations in the community (e.g., Purrucci and Pilisuk, 1970; Turk, 1970, 1973b, 1977; Warren et al., 1974), or the extent to which voluntary associations (such as political parties, League of Woman Voters, religious groups, etc.) have a high and heterogeneous membership within the community (e.g., Clark, 1968b; Turk, 1973b, 1977).

⁴⁴As with social structure, it is important here to distinguish between the conception and analysis of power within a community as a system of actors from the measurement of power structures in multiple separate communities. Again, the latter involves serious compromises in order to capture the former. Burt (1977c) provides a general conception of power structure in terms of differential possession of resources being transformed into patterns of influence through patterns of social and economic exchange relations. References to readings on specific features of power structure are given there. Among the readings having a significant impact on community power structure research are; Hunter (1953), Warren (1956), Banfield (1961), Banfield and Wilson (1973), Dahl (1961), Harsanyi (1962), Hawley (1963), Walton (1967), Clark (1968a, 1968b, 1972), Gamson (1968), Bachrach and Baratz (1970). Three basic approaches have been taken to date in measuring power structures in comparative research; the reputation approach in which informants are asked to name those individuals and groups in a community who are perceived as powerful, the positional

approach in which those individuals and groups occupying powerful positions are located (e.g., mayor, industrialists, councilmen on key committees, etc.), and the decisional approach in which the participation of individuals and groups in major community decisions is analyzed. These approaches are reviewed and compared in Freeman (1968), Aiken and Mott (1970), and Grimes et al. (1976).

⁴⁵Schnore and Alford (1963) present the original outline of an argument equating centralization of community political structure with level of reform government. This argument is elaborated and further substantiated in research linking political structure to community action (see Lineberry and Fowler, 1967; Crain et al., 1969:157-176; Turk, 1977:103-132).

⁴⁶The reading cited in the above three footnotes presents evidence to this point in varying degrees depending on the extent to which a particular work simultaneously considers the social, power and political structure of communities. Particularly noteworthy for their comprehensiveness are some original comparative analyses (recent examples being Grimes et al., 1976; Turk, 1977) and secondary analyses of previously published work (e.g., Clark et al., 1968; Gilbert, 1968; Aiken, 1969; Walton, 1970), although the secondary work suffers from problems in reliability and sampling (cf. Nelson, 1974; Clark, 1975a).

⁴⁷This premise is particularly well articulated in theories of mobilization by Oberschall (1973:102-145) and O'Brien (1975:7-42).

⁴⁸This community structure corresponds to a "mass society" imagery as described by Kornhauser (1959). Coleman (1957:18-23) is an early review supporting the proposition that social relations among citizens in a community facilitate mobilization. More recent support is quite diverse (e.g., Banfield, 1961; Alford, 1968; Beals and Siegel, 1966; Aiken and Alford, 1970a, 1970b; Fellman and Brandt, 1971; Young, 1970; Crenson, 1971; Amir, 1972; Henderson and Rosenbaum, 1973; Oberschall, 1973; Miller, 1975; O'Brien, 1975; Gilmour and McCauley, 1976; Laumann and Pappi, 1976) including a considerable body of experimental work demonstrating that the cooperation between individuals in a competitive situation is increased if the individuals perceive similarities between themselves in terms of race (Sibley et al. 1968; Baxter, 1973) ethnicity (Swingle, 1969), or similar past experiences (Bass, 1966; Druckman, 1967, 1968; Michelini, 1971; Allen and Wilder, 1975; Davison and Jones, 1976; Daher and Banikiotes, 1976; Terborg et al., 1976) and/or if the persons are connected by existing social relations with one

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another (Swingle, 1966; Swingle and Gillis, 1968; Morgan and Sawyer, 1967; Wallace and Rothaus, 1969). There is also a sex effect on cooperation (cf. Rubin and Brown, 1975:169-174), however, it is irrelevant to the macro level of discussion here.

⁴⁹In addition to the literature cited in footnote 48 that demonstrates the facilitating effect of existing social relations between individuals on the subsequent mobilization of those individuals for coordinated action, there is a closely related literature demonstrating that the absence of such relations and/or the existence of opposition relations (so that factions are polarized prior to the initiation of conflict) facilitates the further polarization of factions in a conflict. The literature consists of community and other macro level research (e.g., Smelser, 1963; Beals and Siegel, 1966; Crain et al., 1969; Turner, 1972; Morgan and Clark, 1973; Oberschall, 1973; Foner, 1974; Gamson, 1975; Giles et al., 1976; Spilerman, 1976), as well as experimental research (e.g., Wallace and Rothaus, 1969; Gruder, 1971; Scott and Cherrington, 1974; Allen and Wilder, 1975; Esser and Komorita, 1975; Ross et al., 1975; Hensley and Duval, 1976; Powell and O'Neal, 1976).

⁵⁰A caveat here is that the most intense polarization occurs between erstwhile friends who feel that one has betrayed the other. This caveat, long recognized in sociology (Simmel, 1908; Coser, 1956), is also found in recent empirical work (Swingle, 1966; Swingle and Gillis, 1968).

⁵¹This point is emphasized in Coleman's (1957:13-14) and Azar's (1972) treatment of conflict escalation. Some experimental evidence is available to suggest that the passage of time itself during a discussion could account for this escalation in polarization (Myers and Lamm, 1975; Tesser and Conlee, 1975).

⁵²The most relevant evidence supporting this point in addition to the literature cited in footnote 49 is on the determinants of conflict over water fluoridation (see Crain et al., 1969:157-228; Turk, 1977: 113-122).

⁵³This work is reviewed and critiqued in Bonjean et al. (1969), Hadden and Borgatta (1965), and Berry (1972).

⁵⁴In addition to the work cited in footnote 53, see the studies linking the social, power, and political structure of a community that are cited in footnote 46.

⁵⁵The creation of these subcultures means that urbanization leads to dense social relations within and individual identification with, community neighborhoods (cf. Kasarda and Janowitz, 1974; Hunter, 1975).

⁵⁶This literature is given in footnote 43.

⁵⁷This argument is well articulated by Liebert (1976). Also see Clark's (1974) comments on the extension of the argument to understanding municipal expenditures.

⁵⁸Support for this statement is given in the literature cited in footnotes 46 and 53 analyzing the correlations between community characteristics and measures of community structure. With special reference to social structure, Kasarda and Janowitz (1974), Fischer (1975) and Hunter (1975) offer compelling arguments substantiating the hypothesis that urbanization entails social differentiation and by so doing creates cohesive "neighborhoods" or "subcultures."

⁵⁹Ostensibly, an argument can be made for a third manner in which community characteristics affect community decision-making. With increasing percentages of particular ethnicities in a community, one could expect community decision-making to be in accord with the "values" of the dominant ethnicity. For example, Wilson and Banfield (1964, 1971) demonstrate that districts with predominantly Anglo-Saxon and to some extent Jewish residents tend to vote favorable for community-wide programs and to vote negatively for special interest programs when compared to districts with predominantly Negro, Irish, or Polish residents. In a related approach to decision-making, Clark (1975b) demonstrates that those communities with high percentages of Irish residents have consistently higher percapita expenditures for municipal services than do communities with few Irish residents. These findings could be taken as support for a Downsean (1957) model in that a community or district characterized by a model citizen preference will have community policy in accord with this model preference no matter what political party is in power. Both Clark and the later article by Wilson and Banfield, however, demonstrate that these ethnic community characteristics operate by patterning the form of community government. This is the causal pattern given in Figure 1. Nevertheless, the ethnicity arguments emphasize the importance of not only considering the form of community structure as captured by centralization or differentiation, but also considering the content of structure by asking; "Who occupies the dominant positions?" This point is significant for the nuclear power issue and is discussed with Table 4.

⁶⁰See Crain et al. (1969:157-228) and Turk (1977:113-122).

⁶¹Support for this statement is given in Downes (1970) and Morgan and Clark (1973), however, community characteristics only predict the rioting in particular communities. Spilerman (1976) presents evidence supporting the hypothesis that rioting is a dynamic process in the sense that past rioting in a community and national events makes deprivation prominent and accordingly lead to intense rioting. The concern here is merely with the association between urbanism and rioting rather than the relative magnitude of causal influence. Closely related to this point is the general question of political mobilization of citizens. As indication of mobilization, the percentage of eligible voters who actually turnout to vote and/or campaign tends to be a function of the lack of social differentiation in a community. Since urbanization entails increasing differentiation it is not surprising to find definitive support for a "decline-in-community" hypothesis; lower participation with higher urbanization (cf. Verba and Nie, 1972:229-247). Bonjean and Lineberry (1970) provide evidence that urbanization does not lead to higher voter turnout for the winning party and Black (1974) shows that more intense political campaigning is required to mobilize support in large communities in comparison to small communities. A contradiction here, however, is the positive association between the age of a community and the voter turnout (e.g., Alford and Lee, 1968; Liebert, 1976:113-124).

⁶²The ease of mobilizing support against a mutual enemy is a key point discussed in research on coalition formation (see the classic statement by Deutsch, 1958, and the review by Stein, 1976).

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