THE ECOLOGICAL BASIS OF POLITICAL CHANGE:
URBANIZATION, INDUSTRIALIZATION AND PARTY
COMPETITION IN THE AMERICAN SOUTH

DISSERTATION

Presented to the Graduate Council of the
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By

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This investigation is concerned with testing a causal model linking changes in a political system's socio-economic environment with alterations in political characteristics. The specific forces of interest are those relating to urbanization and industrialization, the development of that way of life called urbanism, and the effects of these environmental changes on voter participation and, ultimately, inter-party competition.

The test model hypothesizes that the processes of urbanization and industrialization together create urbanism, which then affects party competition both indirectly by means of stimulating participation, and directly as well. To illuminate these processes, this study focuses on the American South of the last 30 years because it is in this region that the kinds of changes implicit in the test model have been observed, and thus the region offers the best arena for examining that model.

The method is a comparison of cross-sectional path analyses of presidential, gubernatorial and congressional
elections between 1950 and 1976. Comparison is also made between the Deep and Outer South sub-regions because these areas have experienced different kinds and rates of ecological change and have shown different political responses as well.

Through this approach, this research attempts to answer the following set of questions:

(1) do the data support the relationships predicted by the test model?

(2) are the urban variables more important than industrialization in terms of their total effect on party competition?

(3) is participation a crucial intervening variable, i.e., is it the mechanism by which environmental change translates into political results?

(4) is the pattern of relationships consistent between sub-regions, and between kinds of elections over the time period involved?

(5) does the non-linear model implying a threshold effect explain more variance than a linear model?

The answers to these questions are not totally unambiguous; some findings are not consistent with original expectations. The chief of these is an inverse relationship between urbanism and participation. Another is the non-importance of industrialization, except in Deep South congressional campaigns. Apparently, the industrialization
of the South has had little impact on its politics, at least as measured here.

However, urbanization does show the predicted positive impact on urbanism and, through urbanism and participation, on competition as well. These were the major confirmed linkages of the test model. Some support was also shown for unpredicted direct links between urbanization and participation and between urbanization and competition.

Urbanism was usually slightly more important than urbanization in terms of total effects, for all elections, but participation was the most important variable in the post-1962 gubernatorial and congressional analyses. This indicates that in the lower-level races, participation does have the predicted status of a mediating variable between competition and environmental change. Thus, as the test model specified, the impact of environmental change is translated into party competition through its effect on turnout.

With regard to the question of whether a non-linear model better approximates the shape of the data than a linear one, the answer is positive for presidential and gubernatorial elections, but inconclusive for congressional. The model seems most appropriate, with some modifications, for congressional and gubernatorial elections. The results for presidential elections are somewhat less satisfactory, suggesting that short-term forces may explain presidential
results better than aggregate data. However, for lower-level races, the non-linear model does support the hypothesis that competitive party politics is positively influenced by the development and spread of the urban culture.
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CHAPTER I

ECOLOGICAL DEVELOPMENT AND POLITICAL CHANGE: WHAT LINKAGES, WHAT CONSEQUENCES?

Introduction

The environment of a political system has long been conceived to be a crucial variable in determining both its initial form and its chances for persistence over time. Since earliest recorded political thought, such socioeconomic characteristics as the proper mix of social classes, the distribution of wealth and poverty, population size, physical resources, human resources, and so on, have been thought to affect not only the type of government possible in particular circumstances, but also its stability.

More recently, the focus has shifted from the investigation of attributes to the study of change. Political systems are seen as sub-units of the larger social system, itself bounded by the environment; changes in the environment of the larger system ultimately have impact on the political system as well. The analogy is taken from the life sciences, where individual organisms exist in delicate balance with their surroundings. A change in the environment which upsets the ecological

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balance necessitates the organism's adaptation or, if it fails to adapt, its demise. So it is thought to be with political systems, although the line between adaptation and demise is somewhat more difficult to define.

Even so, the question of the effects of ecological change upon system characteristics has assumed an increasing importance in recent years as the so-called under-developed countries have undergone rapid modernization. Not only political scientists, but geographers, economists, psychologists and sociologists have become increasingly aware of the effects of such change, especially the key processes of urbanization and industrialization, on individuals, cultures, economies, political systems, and policy outputs. Indeed, the search for a theory of urbanization has become one point of convergence for the social sciences:

As the political problems of urbanization expand beyond state lines and leap beyond national borders, the scientific problems of urban political scientists merge with those of social scientists generally. The tendencies combine to . . . underscore the significance of urbanization as the focal point for research, for in many ways cities and urbanizing areas are the most dynamic elements in our political life.²

For some, this search assumes an urgency not found in other branches of study. In a world where change is endemic, understanding the processes of change is vital to our ability

to control and, hopefully, ameliorate the effects of that change. The interest is both theoretical and practical: we search for better theory in order to achieve mastery of the delicate ecological balance in which we live:

The quest for an urban theory is not an idle one. Only from the systematic knowledge that such information can bring are we likely to discover the dynamics of the urban process. Only in that way is there any chance that we may learn enough to control our urban future, a future to which most of the world will very shortly be committed.\(^3\)

Granting the importance of the topic, however, does not make the development of theory, or even the specification of linkages, less difficult. Ecological change has been studied in many contexts, from the effect of the urban environment on individuals, to its effect on culture, on voter turnout and party competition, on policy outputs, and on democratization generally. From these different lines of research, it is possible to draw out the threads of generalizations which might be woven into testable empirical propositions. However, as in all areas of original research, what has been done before has been criticized on a number of conceptual and methodological grounds. What follows is a brief overview of some of the pertinent literature and the major criticisms of past work.

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Overview of Literature

Theoretical Foundations

The most interesting attempt to provide a well-reasoned theoretical base to studies of the ecology of political systems is Dahl's short work on competitive political systems, including the type he labels polyarchy.\(^4\) Dahl draws on the empirical work of political modernization studies to derive his theories, and concludes, "The chances for political competition do indeed depend on the socioeconomic level of society."\(^5\) However, he is quick to add that while certain levels of socioeconomic development may be necessary for the blossoming of a competitive system, they are certainly not in any sense sufficient, and the processes of urbanization and industrialization, so often emphasized today, were not even necessary in some societies of the past:

If a preindustrial society is a poor setting for competitive politics or polyarchy in the modern world, surely this is a consequence of social characteristics such as illiteracy, poverty, a weak middle class, and an authoritarian political culture. Today these characteristics are associated with a weak industrial and urban base. But they are not—or at any rate were not—inherent features of preindustrial societies.\(^6\)

It is no discredit to Dahl's perceptiveness, however, to point out that whatever the historical patterns may have

\(^5\) Ibid., p. 65.
\(^6\) Ibid., p. 74.
been among relatively prosperous agrarian societies which could provide general access to education and mass communication, no such societies exist today. The underdeveloped countries of this era may be initially agrarian, but they are also impoverished, illiterate and bereft of modern means of mass communication in the sense meaning access to competing points of view. If the development scientists are correct, it is precisely the processes of urbanization and industrialization which today interact to produce the social requisites of a modern, participative society.

Dahl, however, limits his hypotheses to the specific conditions for competitive politics, rather than to the processes which may produce those conditions:

The chances that a country will develop and maintain a competitive political regime (and, even more so, a polyarchy) depend upon the extent to which the country's society and economy (a) provide literacy, education and communication, (b) create a pluralistic rather than a centrally dominated social order, (c) and prevent extreme inequalities among the politically relevant strata of the country.7

As with many theorists, both past and present, Dahl is concerned with specifying the conditions which facilitate the development and persistence of that form of government usually labeled democratic: one which rests on citizen consent and participation, open elections at regular intervals, real choices between opposing groups of politicians and a peaceful exchange of power. He was anticipated in this by another

7Ibid.
theorist and promoter of democratic government: James Madison, from whom may be drawn additional specific hypothesis regarding the requisites of democracy.

In his famous essay, *Federalist #10*, Madison argued for a large and diverse republic on the grounds that, for the common man, the competition between diverse interests would produce political security. Madison was particularly concerned with provisions for protecting what would now be termed minority rights against the encroachment of majority opinion:

> The smaller the society, the fewer probably will be the distinct parties and interests composing it; the fewer the distinct parties and interests, the more frequently will a majority be found of the same party . . . . Extend the sphere and you take in a greater variety of parties and interests, you make it less probable that a majority of the whole will have a common motive to invade the rights of other citizens; or if such a common motive exists, it will be more difficult for all who feel it to discover their own strength and to act in unison with each other.8

Madison is arguing that population size and diversity of interests will make it difficult for a unified majority to form and gain control of the government. He implies that this will be difficult because, in a large republic, the sheer number of persons required for a majority will ensure that majorities will be coalitions, rather than the homogeneous

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groups which might be found in a smaller polity. Besides, as Madison remarks, "where there is a consciousness of unjust or dishonorable purposes, communication is always checked by distrust in proportion to the number whose concurrence is necessary."\(^9\)

From these two theorists, then, can be drawn two relationships which will recur throughout the literature dealing with ecological and political change: participative forms of government appear to require participative societies, which rest upon a base of educated, informed citizens with enough wealth to give them both the leisure and the skills to seek their own interests in the political marketplace. In addition, population size yields diversity of interests, which affects the political structure by stimulating competition and decreasing the possibility that a homogeneous majority will be able to oppress the rest.

These initial propositions can be found, in more rigorous formulation, in the literature which attempts to specify requisites for the development of democratic forms of government.

**Studies of Democratization**

There is a substantial body of work, done primarily by economists and some political scientists, attempting to

\(^9\)Ibid.
specify the ecological requisites to the development of
democratic government. Democratizing countries are not yet
democracies, but rather are nations whose political systems
seem to be acquiring some of the characteristics associated
with democracy: the degree of competitiveness in elections
and in the legislature, the extent of the suffrage and the
degree of censorship are often-used measures.¹⁰

Seymour Martin Lipset set the tone for later, more
sophisticated work, in an early study:

Perhaps the most widespread generalization linking
political systems to other aspects of society has
been that democracy is related to the state of
economic development. Concretely, this means the
more well-to-do a nation, the greater the chance
that it will sustain democracy. From Aristotle down
to the present, men have argued that only in a wealthy
society in which relatively few citizens lived in
real poverty could a situation exist in which the
mass of the population could intelligently participate
in politics . . . .¹¹

Lipset argued that economic development means rising
incomes, greater economic security and more education for
those in the lower strata, whose acquisition of such benefits
is accompanied by an attitudinal change toward gradualist,
compromising views upon which the peaceful exchange of power

¹⁰John V. Gillespie, "Introduction: Studies on Demo-
cratization," Macro-Quantitative Analysis: Conflict, Develop-
ment and Democratization, edited by John V. Gillespie and

¹¹Seymour Martin Lipset, "Some Social Requisites of
Democracy: Economic Development and Political Legitimacy,"
American Political Science Review, LIII (March, 1959), 75.
In this view he is joined by a branch of urban sociology, which argues that the process of urbanization, a necessity for economic development, inevitably changes the conditions in which men live and, in so doing, changes their minds:

... fundamental to the process of both socio-economic and political change is a transformation of basic attitudes affecting the habits, beliefs, and emotions of the individual members of society. It is this transformation of individual outlook which tends to generate not only the receptivity to technical change, but also the acceptance of the breakdown of ascriptive traditional norms which is essential to the creation of political institutions which can incorporate continuing social and political change.13

The key variables are urbanization, which brings increased literacy and income, the development of mass communication and transportation, and the inculcation of the norms and skills necessary for political participation:

The secular evolution of a participant society appears to involve a regular sequence of three phases. Urbanization comes first, for cities alone have developed the complex of skills and resources which characterize the modern industrial economy. Within this urban matrix develop both of the attributes which distinguish the next two phases--literacy and media growth. ... The capacity to read, at first acquired by relatively few people, equips them to perform the varied tasks required in the modernizing society. Not until the third phase, when the elaborate technology of industrial development is well-advanced, does a society begin to produce newspapers, radio networks, and motion pictures on a

12Ibid., p. 83.

massive scale. This, in turn, accelerates the spread of literacy. Out of this interaction develop those institutions of participation (e.g. voting) which we find in all advanced modern societies.14

A wide variety of specific studies could be cited at this point, but will be saved until the second chapter's discussion of appropriate methodology and operationalizations. For the present, a look at the work of Phillips Cutright should underscore attempts to specify just how environment and political change are related. Cutright's work is narrowed to some rather precise operational measures of democratization, the equality of income distribution and the development of social welfare programs. While it might be argued that these are not political system characteristics, it is true that democracy does imply a certain egalitarianism hard to sustain in systems with vast differences between individual resources. Indeed, Cutright does provide evidence that such characteristics are closely linked to democratic regimes, rather than to other types.15

Like others, Cutright's conclusions emphasize the interrelatedness of the various processes. His principal hypothesis is that

... political institutions are interdependent with educational systems, economic development, communication systems, urbanization and labor force distribution. A


nation's economic system can develop only if its educational system keeps pace, if people concentrate in urban areas, if communication and transportation systems emerge and if changes occur in family and social life that induce people to fit into the demands of the unfolding system.\textsuperscript{16}

In another article, Cutright tested the hypothesis perhaps most often associated with studies of party competition in American states: that governments which are accessible and thus responsive to their citizens will provide more social welfare legislation than governments "whose rulers are less accessible to the demands of the population."\textsuperscript{17} He concluded that a high level of socioeconomic development enabled nations to benefit from stable government and/or more representative government, while growth in national social security programs was less likely to follow a change away from representativeness regardless of the level of development.\textsuperscript{18}

Cutright's work, then, demonstrates what Dahl postulates; economic development facilitates representativeness and responsiveness in political institutions, but these characteristics also have an effect on policy that is independent of the wider environment. An interactive model, to use the terminology of economics, is probably more appropriate than a linear one. Or perhaps, as other researchers have hypothesized, socioeconomic conditions may pose a threshold

\textsuperscript{16}Ibid., p. 255.

\textsuperscript{17}Phillips Cutright, "Political Structure, Economic Development, and National Social Security Programs," \textit{American Journal of Sociology}, LXX (March, 1965), 538.

\textsuperscript{18}Ibid., p. 547.
below which participative politics is impossible but above which other influences matter more:

Certain levels of "basic" socioeconomic development appear to be necessary to elevate countries to a level at which they can begin to support complex, nation-wide patterns of political interaction, one of which may be democracy. Once above this threshold, however, the degree to which a country will "maximize" certain forms of democratic practice is no longer a function of continued socioeconomic development.19

What these studies show, then, is that the processes of urbanization and industrialization are interactive, producing the very conditions--education, mass communication, population concentration, and attitudinal change--upon which depend further economic development and political change toward more participative political systems. Some studies have concluded that continued economic development itself may depend upon the change to a type of society which is most characteristic of democratic political patterns:

This association between more democratic and better articulated and integrated political systems, on the one hand, and levels of economic development, on the other, probably arises because both the ability to generate sustained economic growth and the evolution of more sophisticated political institutions require fundamental changes in mentality characteristic of Western thought patterns. The participant style of life typical of Western culture tends to generate a capacity to adapt existing institutional frameworks to continual economic and social change. This malleability of social structure is essential both to successful entrepreneurial activity and to effective political modernization.20

Dahl illuminates the difficulty faced by hegemonic regimes like the Soviet Union and China when they try to modernize and develop economically without losing their tight grip on the political system. He generalizes that the more successful such regimes are in stimulating economic development, the more they undermine themselves politically, for "economic development itself generates the conditions of a pluralistic social order." Hegemonic regimes in developing countries face a paradox: they cannot coerce economic development past a certain point, for continued economic development is tied to attitudes and values inimicable to coercion:

If they allow their monopoly over socioeconomic sanctions to fragment and yet seek to retain their political hegemony by exploiting their monopoly over violence . . . then they confront the enormous limitations, costs, and inefficiencies of violence, coercion, and compulsion in managing an advanced society where incentives and complex behavior are needed that cannot be manipulated by threats of violence.

What, then, may be concluded about the relationship between economic development and participative political systems on a cross-national basis? Though no one has settled the question definitively, some propositions may be derived, as Cnudde and McCrone did in their causal analysis of economic development and democratization.

\(^{21}\) Dahl, Polyarchy, p. 78.

\(^{22}\) Ibid., p. 79.
While their work has been criticized on methodological grounds, the two researchers have explicated an initial model of the interaction pattern, which posits that the effect of urbanization on democratic political patterns is not direct, but is felt through the development of literacy and mass communications. The causal sequence is that urbanization promotes widespread literacy and the rise of educational levels, which in turn stimulate the development of mass communications. When mass communications permeate society, democratic political development occurs. Their summation is supported by another researcher, who concluded,

In a cyclical process, industrialization makes large scale urban populations possible, and increasing urban populations are necessary for further industrial expansion. The byproduct of this process is an ever-increasing number of mobilized individuals who, by their activities, will tend to reinforce both industrialization and urbanization. Urbanization necessitates the second process of social mobilization--mass communication. To create an urban society, mass communication is absolutely essential.

From this admittedly selective overview of some of the relevant literature may be derived additional propositions to elaborate on those deduced by Dahl and Madison. These include the following:


1. The interactive processes of urbanization and industrialization both require and stimulate the spread of literacy and a rise in the levels of education.

2. An increase in literacy and the concentration of population in an industrial milieu stimulates the growth of mass communications.

3. It also requires changes in traditional attitudes away from ascriptive towards participative values which are the foundations of modern economic growth.

4. These attitudes facilitate the development of more democratic political patterns, which in turn appear to be necessary for continued development.

Just how these results come about can be elucidated to a certain extent by the studies of the urban ecologists, who have devoted much of their efforts toward understanding the effect of urbanization and urbanism (the urban environment itself) on individuals.

Urban Ecology

Most urban sociologists agree that urban life differs from rural not only in degree, but in kind. Individuals raised in urban environments have different mores and values than those from rural backgrounds, environments bounded by kin and place. But, more than that, individuals from rural areas who move into the urban milieu are subjected to pressures which tend to move them toward the depersonalized, anomic lifestyle characteristic of the urban dweller.
Such was the conclusion of the early urban sociologists, like Louis Wirth, whose landmark article "Urbanism as a Way of Life" summed up the work of the Chicago school. These were his basic propositions regarding the defining attributes of size, density, and heterogeneity:

Large numbers account for individual variability, the relative absence of intimate personal acquaintanceship, the segmentalization of human relations which are largely anonymous, superficial, and transitory, and associated characteristics. Density involves diversification and specialization, the coincidence of close physical contact and distant social relations, glaring contrasts, a complex pattern of segregation, the predominance of formal social control, and accentuated friction, among other phenomena. Heterogeneity tends to break down rigid social structures and to produce increased mobility, instability, and insecurity, and the affiliation of the individuals with a variety of intersecting and tangential social groups with a high rate of membership turnover. The pecuniary nexus tends to displace personal relations, and institutions tend to cater to mass rather than individual requirements. The individual thus becomes effective only as he acts through organized groups.25

In the view of Wirth and other urban ecologists of the day, the size, density, and heterogeneity of cities act on the individual to separate him from the secure web of social relationships characteristic of more intimate environments and expose him to new lifestyles, new values, new ideas. In some respects, such exposure can be positive; the city offers amenities unavailable elsewhere. But in other respects, the very buzzing confusion of city life can make an individual

feel isolated and powerless. As Wirth notes, his only chance to influence his environment comes as he develops the skills to organize himself and others like him into effective social groups. Urbanization and urbanism not only affect the individual, but irrevocably alter his institutions as well:

Urbanization is social change on a vast scale. It means deep and irrevocable changes that alter all sectors of a society. In our own history the shift from an agricultural to an industrial society has altered every aspect of social life. The family shrank the boundaries of its allegiance and refashioned its relationships. The economy was drastically altered in style, purpose and demands. Education was revised to fit urban and industrial needs. Politics occupied a different arena than before, with new participants, new rules, and new objectives... The function and practice of religion was also revised to mesh with the secularism of urban life. In short, the whole institutional structure was affected as a consequence of our urban development. Apparently, the process of urbanization is irreversible once begun. The impetus of urbanization upon society is such that society gives way to urban institutions, urban values and urban demands.26

It might be speculated, then, that the process of urbanization and the experience of urbanism operate on the individual in two ways. The very fact of living in an urban environment exposes the individual to diversity. Where his village may have been homogeneous for generations, the city is heterogeneous and provides acceptance for all manner of ways of living and systems of values. The mere exposure to such diversity erodes traditional belief systems. But beyond

this impact, urbanism requires a change in attitudes; to function in the city, the individual must develop relationships that are impersonal, segmental, superficial, transitory and often predatory. He must develop skills for coping with an impersonal environment, and become adept at combining with others to achieve his ends.

Later sociologists have quarreled with Wirth's somewhat deterministic view and pointed out the tendency for cultural enclaves to form within vast urban areas. Such enclaves may not differ appreciably from the small communities of rural areas in their cultural homogeneity. The impact of the urban environment may only be felt when the individual has to leave the enclave to travel to other parts of the city, or when, for whatever reason, his enclave comes into conflict with another. There is some evidence that the more diverse and well-defined the cleavages within a city, the more likely these differences are to be translated into political conflict, even into preferences for different political parties:

The data suggest that where social-class cleavages are pronounced in a community, class perspectives will ramify into political choices to a greater extent than in communities less sharply polarized. It is further

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27 Wirth, "Urbanism as a Way of Life," p. 95.

suggested that traditional or personalistic frames of reference are more dominant in communities where a class orientation is minimized.29

A summary of propositions about urbanism, then, would seem to echo Madison: the larger the population, the greater the diversity of groups and competing interests. Also, size requires organization, so urbanism promotes the formation of interest groups, whose pursuit of competitive advantage spurs conflict which is likely to spill over into the political arena as competing groups seek to control the allocation of rewards and benefits. Diversity and competition also undermine traditional values and promote their replacement with a more participative orientation which may lead to the development of competitive political parties.

Urbanization and Party Competition

Two complementary streams of research in the subfield of American politics have attempted a more precise specification of the way in which urbanization and industrialization affect political patterns. One focuses on the relationship between urbanization and inter-party competition, the other on urbanization and changing Southern voting patterns. Both derive from what is known as the Key hypothesis, after V. O. Key's speculations on the effects of the one-party systems of the South.

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It was Key's generalization that the industrialization and urbanization of the South would eventually result in more competitive politics, as voters shake off their traditional allegiance to the Democratic party and begin to vote their newer economic interests. Additionally, the ecological change would stimulate the kinds of changes associated with urbanization anywhere, leading to greater political participation by various groups, and the development of competitive parties as groups of politicians compete for the votes of the newly-mobilized. The ultimate consequence of such increased competition, Key supposed, would be a change from policy oriented toward the traditional elites to that more responsive to the needs of the have-nots, the groups heretofore left out of politics.\textsuperscript{30}

Key's hypothesis may be broken into two parts, both of which have been studied often in the last two decades. The first is that ecological change leads to a change in political patterns, especially in rates of political participation and in the development of party competition. Though his immediate topic was the South, Key's generalization has been applied in other areas, including the New England states\textsuperscript{31} and the developing countries, as prior discussion has shown.


The second half of the proposition is that greater participation and increasingly competitive parties effect a change in the type of policy outputs characteristic of a given political system. Whether termed welfare or redistributive, such policies are those which confer benefits on the less-fortunate in society. These benefits may be long-term, as in increased educational spending, or more direct, as in increased payments to unemployment, old age or aid to dependent children beneficiaries.

Heinz Eulau was perhaps the first to study the ecological basis of party systems, using the counties of Ohio as his units of analysis. Like most of the urbanization-competition studies, his was cross-sectional, rather than longitudinal, and consequently should be termed an urbanism-competition study. Even so, he did conclude that a functional relationship existed between competitive or semi-competitive systems and metropolitan or urban ecological structures.32

Eulau was followed by the contradictory study done by Gold and Schmidhauser, who used Iowa counties as their analytical units. The two came to the opposite conclusion: Eulau's hypothesis was unsupported in Iowa at the county and state representative level and supported only erratically in the race for governor.33


For the next few years, debate continued, with various researchers using different units of analysis, different measures of key variables, different methods and different time periods. Eventually, interest turned in other directions, leaving unsettled the question of whether ecological change affects political patterns and, if it does, what the crucial processes might be.

In large part, the inadequate results of this stream of research may be traced to faulty conceptualization. The Key hypothesis had to do with the dynamic of change; each of these studies was cross-sectional and thus a snapshot, rather than a moving picture.

But dealing with change is not a simple task for any researcher. Merely obtaining comparable data over a long-enough time period to matter can pose an almost insurmountable task. However, this objection might have been answered, at least partially, by focusing on an area in the midst of the urbanization process, rather than studying cross-sections of areas which have long been urbanized. Such an area is the

American South. However, while some studies have attempted to link ecological change to changes in presidential voting patterns, these studies, too, have been cross-sectional, and have used data analysis methods in inadequate or inappropriate ways.

Even so, the research which has been done is intriguing, for during the period from 1940 to the present, the South has been a region in transition from a predominantly rural, agricultural economy to a bustling, urban and industrial society. Concomitant with such ecological change has been change in such political patterns as increased participation and increased Republican voting, a trend which, carried to its logical conclusion, should lead to competitive party politics.

Several studies of southern voting have shown that the region's Republican vote, at least during the fifties, seemed characteristic of high-income urban areas. Additionally, studies of individual voters showed that voting for Eisenhower and for Nixon was apparently facilitated by higher levels of income and education as well as by having migrated into the South from elsewhere in the nation.

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Like the urbanization-IPC studies, work on change in southern political patterns suffered from inadequate conceptualization, especially in regard to change over time. While offering evidence that ecological structure matters, the studies failed to address the key question of just how the processes of urbanization and industrialization can be demonstrated to affect changes in rates of participation and in party competitiveness.

A similar charge may be laid at the doors of those who studied the second half of the Key hypothesis, the half linking systemic characteristics to policy outputs.

**State Policy Analysis**

Although Key and Lockard had both dealt with the hypothesis that inter-party competition would lead to policies benefiting the have-nots, it was first tested by Dawson and Robinson, who stated the question most clearly: "... the greater the degree of inter-party competition within a political system the more liberal the social welfare measures that system will adopt."\(^{37}\) Unfortunately, their analysis led to the conclusion that socioeconomic variables were of more importance in explaining state government expenditures than the political system characteristic of inter-party competition.

They were followed in their efforts by a long line of research which, like the urbanization-competition studies, used all manner of measures, techniques and time periods to come to contradictory conclusions. Perhaps the most prolific researcher in the field, Thomas Dye, can be credited with forming what came to be termed "the new orthodoxy," but others supported his conclusion that the environment was more important in explaining policy:

The general conclusion has been that central features of the political system such as electoral and institutional circumstances do not explain much of the variation in policy. There are occasionally high correlations between individual measures of voter turnout, party competitiveness, or the character of state legislatures and some aspects of governmental spending. But these political policy correlations seem to disappear when the effect of socioeconomic development is controlled.38

However, this new orthodoxy is not without its critics, many of whom claim that Key's hypothesis has been improperly conceptualized. Key, they say, posited that competitive politics leads to the type of policies Lowi calls redistributive, those policies which tax one group to provide benefits for some group less well-off. It was not Key's argument that competition affects levels of expenditures irrespective of a state's economic resources. As Fenton summarized the conclusions of his study, which was addressed to this question:

... the wealthier the state, the more it spent in toto. Thus, competition would appear to influence the direction (e.g., highways versus welfare or education) rather than the amount of expenditures, with strongly competitive states tending to allocate a larger share of their fiscal pies to the categories that reallocate goods and opportunities.  

It seems too bad that so much effort was spent in debating whether environmental or political variables explain more of the variation in state policy, however defined. Not only theoretically, but in a very common-sense manner, it seems apparent that the characteristics of the political system must affect policy outputs. After all, policy does not spring full-blown from the environment, like Athena from the head of Zeus; it is made by politicians, who, one suspects, do respond to pressures from interest groups and groups of voters. If only the upper-bracket voters are motivated to participate in politics, if only they have the education, the wealth and the resources to make their desires known, then only their interests will be taken into account.

It is in this manner that we expect the forces of urbanization and industrialization affect the political system and, ultimately, its policy outputs. In addition to increasing resources available for redistribution, economic development promotes diversity and diversity promotes conflict:

Political parties can be seen as loose collections of groups. Their function is to represent the loosely-defined interests of these groups. The more numerous and diverse the groups, the harder it is for one party to represent effectively a clear majority of them. Since a more heterogeneous population should result in more numerous and diverse groups and interests, it should also result in a more competitive party system.\(^0\)

The second half of the equation is the effect of competition on policy:

\[\ldots\] two-party competition almost invariably leads to appeals for the support of lower-income voters because they are so numerous, while other political systems tend to be more oligarchical and less responsive to the needs and desires of the poor. Consequently, it is believed, two-party competition is more likely to lead to subsequent governmental actions addressed to these needs. If this is true, it should be reflected in relative levels of governmental expenditure, particularly for items such as welfare and public education, which are designed to reduce inequalities in the distribution of goods and opportunities.\(^1\)

All these propositions concerning the question of environmental influences on political system characteristics, and the influence of both on policy, yield what may be termed a developmental hypothesis:

Industrialization and urbanization act to concentrate large numbers of people in one place and to differentiate them according to their economic interests;

At the same time, the process promotes rising levels of education and wealth and breaks down traditional values and patterns of behavior;


\(^1\)Fenton, *People and Parties*, p. 32.
Groups formerly left out of the political process become more likely to participate, competing with other groups for the allocation or redistribution of resources which the developing economy generates;

As new groups enter the political arena it becomes impossible for one party to accede to all their demands. Other parties develop to compete;

If a two-party system develops, both sets of politicians will have to respond to the desires of the more numerous groups which have entered the political arena. Since these groups are the have-nots of traditional politics, responding to their needs will mean a turn toward redistributive policies;

The appeal to such groups and the benefits now to be gained from participation will draw more participants into politics, so competition will have the effect of increasing participation, as well as benefiting from it.

Such a model seems eminently reasonable, and is supported by some of the literature sketched in this overview. However, it is contradicted by as much research as supports it. The question of verifying these hypothetical relationships remains. In the concluding sections to this chapter, criticism of past efforts will demonstrate why the results have been so conflicting and lay the groundwork for what this study proposes to do to resolve these difficulties.
Critique of Past Research

Conceptualization

Economic development logically implies a process, and yet most studies have utilized cross-sectional rather than longitudinal analysis. In part, this is no doubt attributable to the difficulty of getting appropriate data for enough time points for methods such as time series analysis to be validly used. Even so, as Gray noted in respect to policy-making studies;

... policy-making is a process. It occurs over time within a governmental system. It does not occur across states or nations; hence, cross-sectional correlation analysis or cross-sectional regression analysis does not usually reflect the process from which the data are generated. A longitudinal research design is appropriate because it more truly reflects our theoretical focus--explaining differences across time.42

Gray's study compared a political system model with cross-sectional and time-series data and showed the model to be more powerful in explaining differences in policies over time. She did the same thing for the economic resources model with the same results, but could not use both types of variables in the same model because of data limitations (the problem of degrees of freedom). She suggested that the relative effects might better be sorted out through path analysis.

43 Ibid., pp. 253-255.
Another conceptual criticism of these studies is that the methods used, largely correlation analysis, imply an incorrect model. Both correlation and regression techniques assume linear and additive relationships among the independent variables. Several critics have pointed out that there is little theoretical justification for making such assumptions, first, because the possibility of interaction between political and economic variables has not been accounted for, and, secondly, because various kinds of threshold effects may be present which would mean that the appropriate model would be non-linear as well as non-additive.

One researcher suggested measuring the interaction between political and economic variables by means of an exponential regression equation made linear by the common log transformation:

Theoretically, such a model assumes that state policy making is incremental and closely tied to a state's economic ability to provide services, until a plateau of development is reached. When economic development is sufficient to provide the monetary base for needed services, political development, in the form of party competition and increased voter turnout, is necessary to focus the attention of state decision-makers on needed increases in the quantity and quality of services. At such a level of economic development, inter-party competition and other aspects of political development, if present, will result in greater expenditures than if such development is not present.\footnote{James C. Strouse and J. Oliver Williams, "A Non-Additive Model for State Policy Research," \textit{Journal of Politics}, XXXIV (May, 1972), 651-652.}
In addition to an economic threshold which must be passed before political variables can have effect, there is some reason to expect ceiling effects as well, both in regard to policies and to increases in competition. While criticizing the use of expenditures rather than some measure reflecting the ratio of effort to need, Albin and Stein commented:

An upper boundary to relief (a poverty line, perhaps) seems more obvious than an upper boundary for other categories of expenditures. There is a sort of implicit point in the public's mind beyond which a "need" to aid the poor can be satiated. . . . This notion reflects the limited power of the relief recipient in conventional politics and the fact that few persons in the wider population consider themselves potential relief recipients, whereas they see themselves as potentially benefiting from most other public services. 45

In like manner, differences in customary rates of turnout may impose a ceiling on the degree of increased participation that is possible. In a state with normally high turnout, whether for historic or cultural reasons, economic development may not substantially increase participation simply because only a small pool remains of voters who are not already involved. However, in some states, particularly those of the South, where turnout has been pitifully low for decades, a much greater reservoir is available for tapping. 46


It is also possible that increases in competition might not affect welfare expenditures in a single direction. If theories of party competition are accurate, competitiveness acts to bring citizen demand and system response into closer approximation. Although it seems reasonable that the participation of the lower strata would increase welfare expenditures, it is possible to imagine circumstances where the opposite effect might occur. For instance, increasing participation by blacks in the South could well stimulate participation by poor whites who perceive blacks as a political threat. If the whites turn out in greater numbers to support candidates with attitudes inimical to black needs, or just conservative regarding government activity, competition might well depress welfare expenditures rather than raise them.\textsuperscript{47}

The difficulty of measuring demand through the commonly-used aggregate ecological variables has also been seen as a major weakness of policy studies:

\ldots it seems clear that Key was not suggesting that competitive states would spend more than non-competitive states, but rather that they would tend to produce policies more in line with the demands of the citizenry. \ldots The technique of correlation analysis is not appropriate \ldots since it searches for a linear relationship between competitiveness and some policy variable. Such a formulation excludes the concept of demand entirely, unless one assumes that the demand for the policy in question is approximately the same in all of the states.\textsuperscript{48}


The treatment of political process variables as surrogates for demand has also been criticized, on the conceptual ground that process attributes should be treated as modifying variables "which either facilitate or inhibit the accurate translation of demands into outputs," that is, not as determinants but as intervening or mediating variables. 49

Measuring actual demand, particularly for times past, is a difficult methodological problem. One interesting attempt to incorporate more direct measures, expressed in terms of citizen policy preferences, is that of Frank Munger and his students, who used simulation to break national survey responses down into state-level data. These studies showed, not unexpectedly, that public opinion mattered more in explaining policy than did either the environment or political system characteristics. 50 However, the Munger-Weber work focuses on such policies as right-to-work laws, gun control, public accommodations and parochial school aid, rather than on the policies which directly redistribute immediate, tangible benefits, i.e., money. Nevertheless, the point of these studies is cogent:

... much of the leading research in comparative state politics during the past two decades has been based upon unproven assumptions about the nature of


public preferences on issues of public policy. Because of the unavailability of actual data on the policy preferences of state electorates, these studies have had to adopt assumptions about the wishes of the public in order to evaluate how linkage institutions like political parties or state legislatures influence policy making.51

Whenever aggregate data is used as a measure of demand, the results should be viewed with caution, since the assumption that most have-nots, however defined, favor redistribution, is just that: an assumption. Even given this caveat, estimating the impact of both environmental and systemic variables is important, for preferences are derived from one's position in the social and economic milieu, and are mediated through particular political systems. They cannot affect policy if they are unformed or unexpressed or if, though formed and expressed, policy-makers have no reason, such as threat of loss of office, to pay attention to them.

What all these criticisms have in common is the complaint that in one way or another, the conceptual model has not been appropriately specified. Indeed, some persons have claimed that after years of research, the original Key-Lockard model is still untested, because researchers have not dealt with the model as formulated by them.52 One writer even lays the


blame at Key's door, claiming he has been misinterpreted because he was "simultaneously a political scientist, devoted to the development of theory and hypothesis testing, and also a journalist, who liked to tell a good political story and wrote as if he were being paid by the word."\textsuperscript{53}

More pertinent is that type of criticism which calls for some kind of causal analysis:

Questions about the importance of political versus socioeconomic variables that have pervaded the literature on policy determinants can be resolved through statistical procedures only when those procedures are applied in the context of a fully specified causal sequence. Grouping several independent variables together into political and socioeconomic categories while ignoring the direct and indirect relationships among the independent variables themselves produces unrealistic results.\textsuperscript{54}

Part of the difficulty of specifying the causal sequence may be due to the fact that the interaction between economic development and political system characteristics is not well understood. There are, after all, two parts to the Key hypothesis. The first is that changing ecological structure affects political structure. The second is that change in political system characteristics effects a change in the type of outputs of a given system. Before the entire hypothesis can be adequately tested, then, the interaction between the political system and its environment must be understood.

\textsuperscript{53}Ibid., p. 411.

This research, accordingly, will attempt what Tompkins suggests: a specification of the direct and indirect causal links between the ecological and political variables. The methodological criticisms of the policy studies will be examined for the light they shed on appropriate ways of examining causal links, but the focus here is the first half of the Key hypothesis: that urbanization and industrialization have a positive effect on the likely development of party competition.

This study will approach the problem by examining a political system in the process of change along those ecological and political continuums predicted by the hypothesis. That is, the interaction of socioeconomic and political change over time will be studied to determine what relationships exist and what the causal sequences appear to be. To do this, a model will be developed and tested with data from the American South.

At first blush, the choice of the South may seem strange. It is, after all, usually omitted from urbanization-party competition studies on the grounds that its historical deviance skews results. (In other words, if the data do not fit, throw out the data.) In other cases, when regional controls have been introduced (South versus non-South), the pattern of relationships changes.

However, the South is perhaps the one area in the nation which has recently experienced precisely the kinds
of ecological and political change required for a study of the major hypothesis, that predicting increased competition will follow economic development. In addition, data for the South are likely to be more available and more reliable than data for the developing countries of the world.

Not to be overlooked, either, is the rationale that initial testing of such a hypothesis will benefit from the elimination of the possible contaminating effects of differing cultures. By studying a region homogeneous with respect to historical and cultural influences, the effects of such influences are held constant, so that the relationships of interest may be more easily revealed.

Such an approach is precisely that recommended by Uslaner:

What needs to be done is very simple if one's goal is to test Key's hypothesis . . . we need a longitudinal analysis examining changes in party systems. Key's arguments can only be examined by comparing previously one-party systems with the more competitive situations which appear to have developed, particularly in the South. . . .

Through the use of path analysis, this study will build a model of the effect of urbanization and industrial development upon the political system characteristics of turnout and party competition in the South of the last thirty years.

55 Uslaner, "Comparative State Policy Formation, Inter-party Competition and Malapportionment," pp. 421-422.
Drawing on the various branches of literature reviewed here, the next chapter will specify the operational measures of the crucial variables, the data to be used, and the precise specification of the theoretical model of ecological development and political change.
CHAPTER II

THE MODEL AND THE METHOD

Introduction

An Approach to Causal Modeling

Drawn from different disciplines, the large body of research overviewed in Chapter I has as its common goal explicating the relationships between environmental change, political system characteristics and policy outputs. Implicitly, such research aims at illuminating cause and effect so that, once understood, such processes may become more amenable to human control.

However, the methods of past research, while demonstrating associations between different variables, have shed little light on the causal links that may exist between such processes as urbanization and industrialization and system characteristics like participation rates and interparty competition. This may be due mainly to the limitations of the commonly-used techniques of correlation and even regression.

Of course no technique can prove causation. But methods are available which, used with proper caution, can aid in constructing and refining a model which theory
positas as a reasonable explanation of reality. The more
testing and modifying a model undergoes, the surer it is
that the model reflects the real world with acceptable
accuracy.

The technique of choice in this study is called path
analysis. It is a use of multiple regression to test for
predicted non-zero relationships between variables and to
determine the strength of the relationships after a causal
ordering has been specified. The ordering of the variables
is established by the theory which the researcher wishes
to test.

The researcher begins by specifying which variables
are logically prior to others in a causal diagram. Of all
the possible linkages in the model, only the ones of theo-
retical significance are expected to have non-zero coef-
ficients; whether they do or not is the explicit test of
the model as the explanation of the technique later in
this chapter will make clear.

Like any other method, path analysis has assumptions
and limitations which must be kept in mind when inter-
preting results. But its advantages outweigh its defects
in comparison with the flaws of approaches used in prior
studies.

Defects of Other Approaches

Ecological studies of political development and party
competition began with correlation analysis. Typical are
Dye's studies,\(^1\) in which he correlated available socio-economic and political data to support his thesis that environmental variables were more important than political ones in explaining state expenditure levels. Lipset and Cutright used similar approaches in their individual studies of the process of democratic political development.\(^2\)

Such studies have been faulted on the obvious ground that correlation is not causation, as McCrone and Cnudde comment:

Regardless of the imaginativeness and utility of these studies, they do not constitute theoretical formulations of the process of democratic political development. They remain studies of the correlates of democratic political development.\(^3\)

In addition, there is some question of the validity of using partial correlation coefficients to determine whether the proper model of relationships between

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environment, political characteristics and outputs is the spurious one favored by Dye, Dawson and Robinson, or whether the Key-Lockard developmental model is more appropriate.

The Key-Lockard model defines a developmental sequence between economic development and inter-party competition and the level of state welfare expenditures. The Dawson-Robinson model, like Dye's, specifies that welfare expenditures and inter-party competition are both a function of economic development; any relationship between IPC and policy is therefore spurious. Cnudde and McCrone criticize the use of partials in studying this question on the grounds that we will observe reductions in the partial relationships with this kind of control when the relationships are either spurious or developmental. As a result we cannot use this test to distinguish between the two models. This is the procedure utilized in the recent literature.

Correlation analysis has been of some benefit in revealing associations between various measures. However, it is but a first step in building a realistic model:


6Ibid., p. 861.
Although there are fairly clear relationships between various ecological characteristics in the states and the level of commitment to a number of governmental services, the demonstration of such correlations does not, in and of itself, offer a comprehensive explanation of the factors which structure the formation of state policy. Such correlations provide a starting point for analysis rather than a logical culmination of inquiry. They do not specify the links between ecology and policy. . . . Furthermore, the relationships which have been explored still leave a large area of unexplained variation in policy between ecologically comparable states.  

Studies using the more revealing technique of multiple regression have been criticized for improper specification of the model, especially in regard to its linearity and additivity. While regression requires the assumption of linearity, transformations are available which permit the exploration of non-linear relationships.  

As several researchers have commented, non-linear relationships might well be expected in studying economic development and political change. As others have pointed out, the proper model may be not only non-linear but non-additive as well.  

In addition to a possible geometric relationship between the independent and dependent variables, Strouse and

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Williams, among others, find interaction between independent variables not only possible, but highly likely. What is more, their investigation shows that non-linear, non-additive models explain more variance than linear, additive ones. They are supported by other researchers who have suggested the same thing.

For example, Broach examined the relationship between party competition and various state welfare policies by comparing the results of a linear model with that of the non-linear double logarithmic transformation. The linear model is the one familiar to all regression students, \( y = a + bx \), in the simple regression case; the transformation yields the equation \( \log \varepsilon y = \log \varepsilon a + b \log \varepsilon x \). This transformation can result either in an upward or downward-bending curve, depending on whether the \( b \) coefficient is less or greater than unity.

\(^{10}\) Ibid., p. 657.


\(^{12}\) Broach, op. cit., p. 738.
Using a variation of Pfeiffer's measure of inter-party competition,\textsuperscript{13} Broach compared the results of the linear model with the double log model in regard to such welfare policies as per pupil expenditures, average weekly unemployment benefits, federal percentage of welfare payments, and Fry and Winter's measure of the net redistributive effect of revenues and expenditures in each state. He found that the double log model significantly increased the explanation of variance only in the equation relating party competition to Aid to Dependent Children (ADC) payments. In the other cases, there was no significant difference in the two models; both were equally satisfactory in explaining variance.\textsuperscript{14}

In spite of these results, Broach recommends that future researchers at least investigate non-linear models. The difficulties with briefly reporting results of non-linear analyses, he thinks, will lead researchers to more precise specifications of their model:

\ldots non-linear analyses cannot always rest upon the reporting of correlation coefficients alone but frequently will require greater attention to displays of curves and bivariate data plots. Because of these complexities attendant to nonlinear analysis, the public policy researcher will frequently be required to reduce the scope. \ldots A more limited focus would


\textsuperscript{14}Broach, pp. 740-741.
permit more explicitly theoretical formulations and more detailed studies of the relationships between theory and data.\textsuperscript{15}

Taking Broach's advice into account but finding it irrelevant, Tompkins has attempted to use state-level data to build a causal model relating industrialization, party competition, turnout and a policy output, in this case per recipient ADC payments.\textsuperscript{16} Tompkins' article is perhaps the most completely formulated attempt to translate the verbal complexities of the original Key-Lockard hypothesis into a temporally-specified model.

Using path analysis, Tompkins discards several possible paths among his independent variables of industrialization (percent of work force in non-extractive industries), per capita income, percent foreign-born, IPC, voter turnout and per recipient ADC. He is able to eliminate not only the paths his hypothesis predicts to be unimportant, but others as well. He finds, for instance, that turnout can be dropped from the model without substantially altering its explanatory power. Tompkins' explanation for this is that competition creates issue politics; politicians in such a system perceive their continuance in office to be a function of their issue stands. Consequently they act

\textsuperscript{15} Ibid., p. 743.

\textsuperscript{16} Tompkins, op. cit.
as if voters are paying attention and will turn out to defeat them, whether the voters are actually doing so or not. Therefore, it is competition which has the direct impact on policy and not turnout.  

The Problem of Time

Tompkins' study illustrates the importance of the path analytic approach in the environment-versus-political system argument common to the recent literature. In using theory to guide his specification of temporal sequence and predictions of which relationships will be non-zero, Tompkins is able to broaden his understanding of the process by which environment and system interact to affect outputs. His study, however, does suffer from another defect characteristic of most work in this area: it is cross-sectional and time-bound, as Tompkins himself is careful to point out.  

Alker's work has shown that cross-sectional analysis yields correlations which are not equal to time series correlations, nor should they be expected to be equal. Gray has also demonstrated that time-series analysis is more powerful than cross-sectional analysis, but data

\(^{17}\) Ibid., pp. 409-410.

\(^{18}\) Ibid., p. 415.

limitations prevented her from assessing the relative effects of socio-economic and political variables in the same time series equation. Like Tompkins, she suggests that the relative effects can be better sorted out through path analysis than ordinary multiple regression.20

This criticism of the cross-sectional approach is echoed by Bruner and Liepelt, who make the point that such analysis will not reveal anything about a model unless the model is properly specified and the data are drawn from systems in equilibrium.21 Likewise, Dyson and St. Angelo say the focus should be on change, rather than on static measures.22

The problem of incorporating time into a mathematical model is a difficult one for political scientists to solve, particularly when dealing with the kind of aggregate ecological data that are gathered mainly in ten-year intervals. Not enough time points exist for data that are congruent and drawn from the same units over time. Where


economists can get quarterly or even monthly data on such measures as time deposits, interest rates and so on, political scientists concerned with data measuring work force composition, percent urban, percent nonwhite, and other socio-economic measures have to contend with data that are often defined differently from one census to the next and not measured the same way, if at all, between the censuses.

Various ways have been suggested for dealing with the problem of time. One proposal of some validity is to use lagged variables, as economists do when using past quarter's prime interest rate to explain current construction. However, economists, through long usage, have a fairly clear idea of how long a lag is appropriate; political scientists do not. For example, a study on Wallace voting found that the current racial composition of southern communities is not as valuable in explaining the Wallace vote as the composition of thirty years past:

"...there is some indication that attitudes may lag considerably behind changes in the objective social environment. The last thirty years have seen very substantial rural-to-urban and South-to-North Negro migration, thus changing the racial composition of many southern communities. However, measures of black concentration using the 1940 census for both county and state percentage nonwhite are more closely related to 1968 voting than the more proximate 1970 data."  

That is all very well, for a report of a discovered relationship. However, there is no good reason to think that other aggregate measures would need a similar thirty-year lag, nor that that particular lag will continue to be stable. For instance, it is generally thought that industrialization brings about a rise in education levels, because greater literacy is required in a non-agricultural society. But what might be the lag time between a change toward an industrial economy and a resulting rise in the numbers completing high school? Whether to lag such a variable five, ten or twenty years seems like an arbitrary choice at the present state of knowledge.

In addition to lagged variables, change scores can also be used to introduce a time dimension. In effect, a change score controls for the value of a particular variable at the initial time point by subtracting that value from the value at the second time point. The change in the variable over the given time span is considered to be the focus of interest, rather than the actual value at any particular point. However, change scores have the defect of making it difficult to compare amount of change among cases whose initial values were greatly different. The absolute change might be equal, but could easily represent a great difference in one case and a small one in another.
For example, suppose net migration between censuses is the variable under consideration. If the net migration value is 20,000 persons in each of two cities, the figure might represent a change from 10,000 to 30,000 in one case, and a change from 250,000 to 270,000 in the other. The absolute change is the same in each case, but the effect, in terms of providing city services, for instance, is likely to be quite different.

Another commonly used change indicator is percent change, the formula for which is \((t_2 - t_1)/ t_1\). Verbally, it is the difference between the values at two consecutive time points, divided by the value at the initial time point. While this overcomes objections to simple change scores, it still is in part a function of the value at the initial time point. As Van Meter notes, "indicators of percent change are not independent of \(X_{t1}\), and the relationship between values at \(t_1\) and subsequent change tends to be a negative one."\(^{24}\)

A different measure, independent of initial values, can be created by residualizing the value at the second time point by the value at the first through least squares procedures. Change thus becomes "a relative concept which is operationalized, for any particular case, in terms of

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the values at \( t_1 \) and \( t_2 \) for all cases included in the regression equation."^{25} Although this does remove the dependence on values at \( t_1 \), the approach is weakened by the imposition of an assumption of linearity and by the fact that extreme cases greatly affect the regression line, and thereby disproportionately alter the residualized change scores for the rest of the cases.

Van Meter notes that results differ according to the measures of change chosen, but that simple change scores are the least appropriate in any case. Choosing between percent change and residualized change scores must be done on the basis of which measure is most appropriate for the data to be used and the objectives of the research. He recommends percent change where the data are not subject to formal constraints (a fixed upper limit, as is the case with percentage data). As examples, he cites variables such as these: pupil-teacher ratio, number of legislators, personal income, population, median income and per capita personal income. On the other hand, he recommends residualized change scores if the objective is the comparison of change in multiple cases and if the data are of the type with formal limits. However, he notes that any results may be an artifact of the measures chosen.^{26}

^{25}Ibid.
^{26}Ibid., p. 137.
Another way of by-passing some of the time-bound constraints of cross-sectional data is studying the same population at different points in time and comparing the results across time. At the individual level, this is done with consecutive surveys. For instance, any one survey of presidential popularity gives only the rating at a certain time. But the ups and downs in that rating over time may reveal a pattern that a single survey cannot.

Consecutive cross-sectional analyses are analogous to looking at successive snapshots of an individual over a period of years. While any one snapshot reveals little, the sequence allows the observer to assess changes which are taking place too slowly to be captured otherwise. By comparing cross-sectional analyses using the same variables measured at different time points, at least some of the limitations of a single cross-section may be avoided. It is not the time-series which is analyzed, but the cross-sectional change over time. In this study, time will be accounted for primarily by comparing a series of cross-sectional path analyses, although two percent-change measures will be used to represent the processes of urbanization and industrialization.

As this review of major methodological criticism has shown, much remains to be learned about the processes by which environment, political system characteristics and change interact. Given the limitations of existent data,
the most likely way of discovering relationships is to use path analysis at successive time points in an area marked by ecological and political change, such as the American South of the last thirty-odd years.

The South As A Testing Ground

Unlike the Northeast, which has long been urbanized and industrialized, and where variation in measures of these processes might be limited, southern states have in the last forty years undergone the kinds of changes crucial to the Key-Lockard hypothesis. Where it was rural and agricultural, much of the region is now urban and industrial. Where it was one-party Democratic, discouraging participation by blacks and poor whites, it now has experienced the rise of Republican voting and increased participation by the lower strata of society, the have-nots of Key's formulation.

This period of change coincides with the availability of reliable, congruent census data at three points in time: 1950, 1960 and 1970. Census data prior to 1950 are very limited, while the later censuses have a wide variety of variables to choose from for operational indicators, or at least a much wider variety than previously.

Studying the South has an additional advantage over studying nations or all of the United States: in effect, its common historical background and culture acts to hold
constant what might otherwise be disturbance terms in the model. Lockard overcame this same difficulty by limiting his research to New England, on the grounds that "the six New England states have a sufficient similarity of heritage, governmental structure, economy, and social composition to make such a comparison possible." 27

So it is with the South. It is a region with a common culture and history, and similar governmental and economic structures. Since it has experienced precisely the kinds of change crucial to the hypothesis at issue, it offers almost a perfect laboratory for the testing of a hypothesis which, fittingly, originated in the study of its peculiar institutions.

Path Analysis

The Method

Although some kind of theoretical model underlies any verbal formulation of relationships between variables, it is the purpose of path analysis to make this model explicit and test it. As Tompkins says, "path analysis is simply a systematic use of multiple regression procedures to examine causal interrelationships." 28 Unlike regression, however, which focuses on testing alternative models to find the one


28 Tompkins, p. 403.
with the best fit to the data, path analysis "is basically concerned with estimating the magnitude of the linkages between variables and using these estimates to provide information about the underlying causal processes."  

Its procedure is fairly straightforward, especially to those familiar with multiple regression. The researcher begins by making certain a priori assumptions about relationships in the model. In particular, he must be willing to assume a weak causal order, which will permit him to place some variables prior to others in his path diagram. He must also assume causal closure, that is, at some point he must be willing to say that all the variables that matter are represented in his system.

The researcher must also use variables measured with interval data and be sure that his model and data meet the basic regression assumptions. These include the specification of a linear relationship between the dependent variable Y and the independent X's, the requirement that the error term have a zero expected value and be normally distributed, a constant variance for all observations, and that the error terms corresponding to different observations be uncorrelated. These are the assumptions of the classic simple regression model. In the multiple regression case, where there is more than one independent variable,

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it is further assumed that no exact linear relationship exists among two or more of the independent variables.\textsuperscript{30}

The model in question must specify a linear relationship between $Y$ and the $X$'s because the purpose of the technique is to identify the straight line that best fits the data. In the case where the data are related to one another in a curvi-linear fashion, no straight line will describe the relationship very well, and the parameter estimates are likely to be of little or no value. If the researcher suspects a non-linear relationship, he may use data transformations such as the double log transformation, to make the data fit the assumptions of the model. He may then investigate nonlinear relationships as long as the data, when transformed, are related in a linear fashion.

The assumptions that the error term have a zero expected value, a constant variance and a normal distribution justify the use of significance tests to determine the validity of the model and the variables included in it. If one can assume that individual errors are small and independent of one another, then the normality assumption is reasonable, and statistical tests may be applied. If they cannot be used, then there is no way of determining whether the parameter estimates are reliable or whether, instead, the results are due to chance.\textsuperscript{31}

\textsuperscript{30} Pindyck and Rubinfeld, pp. 16-17.

\textsuperscript{31} Ibid., p. 20.
In addition, if parameter estimates are to be efficient, the assumption of homoscedasticity (the variance of Y is the same for any X) must be satisfied. If heteroscedasticity (the opposite condition) is present, the standard regression procedure will lead to biased estimates of parameter variances, with the result that any statistical tests will be incorrect and misleading. 32

This is also true of the assumption that the error terms for different observations be uncorrelated. If they are not, the standard error of the regression will be biased downward, leading to a tendency to reject the null hypothesis when it should be accepted. 33

The assumption of independence among the X's is necessary for the interpretation of the coefficient associated with each X, which measures the change in Y associated with a unit change in X when the effects of all other X's are held constant. Of course, if one X is a function of another X it is impossible to hold the effect of the second X constant, and thus the coefficient attached to the other X cannot be meaningfully interpreted. Moreover, if a sufficiently high degree of correlation is present, it becomes impossible even to obtain the regression coefficients, since the system of normal equations to

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32 Ibid., p. 96.
33 Ibid., p. 107.
be solved contains two or more equations which are not independent.\textsuperscript{34}

In practice, as will be discussed later in this chapter, many of these assumptions may be violated if the sample of cases is large enough. As Bohrnstedt and Carter have noted:

\textit{. . . there is ample evidence to suggest that regression analysis is adequately robust except in the presence of measurement and specification error. It has been shown that the problems of heteroscedasticity and nonnormality do not, in fact, generally cause serious distortions. In cases where they do, on the other hand, adequate correction procedures exist to minimize these distortions.}\textsuperscript{35}

With the above conditions satisfied, the researcher then is able to draw his path diagram by following two definitions and three rules attributed to Wright. The definitions are (1) any correlation between two variables can be decomposed into a sum of simple and compound paths, and (2) a compound path is equal to the product of the simple paths comprising it.\textsuperscript{36} The rules for drawing paths are the following:

(1) a path may go through the same variable only once;

(2) no path may go backward on an arrow after it.

\textsuperscript{34}Ibid., pp. 67-68.


has gone forward on a different one; and

(3) no path may pass through a double-headed curved arrow (which represents an unanalyzed correlation between exogenous variables) more than once in a single path.

Important limitations are (2) and (3), which mean that the model in question must be unidirectional, without feedback loops. In conventional regression analysis, interaction may be accounted for by the use of lagged variables, which unfortunately introduces the problem of serial correlation, or alternatively by transforming two variables into one interaction variable. This is possible when the researcher is certain that he has understood the relationship between the interacting variables correctly enough to be sure that the variable he creates validly represents the relationship.

Without resorting to the creation of substitute variables, interaction cannot be permitted in path analysis procedures, since it generates a system with more unknowns than equations, which is not solvable. The equations are said to be underidentified, which means that no estimation technique is available that will yield unbiased and consistent estimates of the coefficients.

These necessary limitations, the covariance and coefficient restrictions, account for Wright's direction that no arrow can double back on itself or go backward through a variable once it has gone forward. The assumption
of unidirectional causality, then, is necessary for solving the regression equations in path analysis.

The diagram in Figure 1 will demonstrate more clearly the operation of path analysis. It represents the expected nonzero relationships among urbanization, industrialization, participation and party competition. The double-headed curved arrow between urbanization ($X_2$) and industrialization ($X_1$) indicates that both are exogenous variables, uninfluenced by other variables within the model, and that the correlation between them is unanalyzed.

The straight arrows from those variables to $X_3$ (participation) indicates that both urbanization and industrialization directly affect participation. The direct arrow between $X_2$ and the ultimate dependent variable, party competition ($X_4$), reveals a predicted direct, non-zero effect of urbanization on competition. The path from $X_1$ and $X_2$ through $X_3$ suggests an indirect influence of $X_1$ and $X_2$ on $X_4$. The fact that there is no path drawn directly from $X_1$ to $X_4$ implies that this model predicts that the impact of industrialization on competition is to be felt only indirectly, through participation.
WHERE: $X_1 = \text{industrialization}$  
$X_2 = \text{urbanization}$  
$X_3 = \text{participation}$  
$X_4 = \text{IPC}$

Fig. 1--Sample path diagram representing the relationship between industrialization, urbanization and participation and party competition.

The p's are path coefficients, or the standardized betas associated with each regression equation. The regression equations are derived by treating each of the variables in the model as dependent in order of temporal sequence and using as independent variables all those which precede the current dependent one in time. Thus in the sample model, the system of equations yielding path coefficients would be the following:

(1) $X_1 = e_1$
(2) $X_2 = e_2$
(3) $X_3 = B_{31.2}X_1 + B_{21.3}X_2 + e_3$
(4) $X_4 = B_{41.23}X_1 + B_{42.13}X_2 + B_{43.12}X_3 + e_4$

This would be the case when all the X's are in standard form (Z scores), the e's equal the error terms, and the B's equal the standardized regression coefficients. Solving each equation in this system would yield path coefficients for each possible relationship in the model shown in Figure 1. The path between $X_1$ and $X_4$ should be zero if the model is correct.

Advantages of Path Analysis

Path analysis offers a number of advantages over other techniques, not the least of which is forcing the researcher to make his theorizing explicit. As Duncan has commented:

. . . any causal interpretation of these data must rest on assumptions—at a minimum, the assumption as to the ordering of the variables, but also assumptions about the unmeasured variables . . . represented as uncorrelated residual factors. The great merit of the path scheme, then, is that it makes the assumptions explicit and tends to force the discussion to be at least internally consistent, so that mutually incompatible assumptions are not introduced surreptitiously into different parts of an argument extending over scores of pages.38

Duncan adds that making the causal scheme explicit has the added advantage of allowing criticism to be more sharply focused, a benefit to succeeding studies. However, he warns against causal diagrams that are not "isomorphic with the algebraic and statistical properties of the

postulated system of variables," and recommends that such diagrams only be employed in conjunction with the mathematical approach of path analysis.

There are other techniques which have been proposed for this kind of simple causal modeling. The most commonly-known is the Simon-Blalock technique which began with Simon's concern with "the conditions under which a nonzero correlation between two variables provides evidence for inferring the existence of a causal relationship between the two." If the researcher is willing to assume a time sequence between the two, that is, that one precedes the other, and that the error terms associated with each variable are uncorrelated, then the correlation of the two variables is evidence of causation. In the three-variable case, Simon employs a rather tedious procedure of multiplying pairs of equations together to obtain an estimate of the correlation between the two variables of interest, and examines this estimate to see when it would become zero.

Blalock extended Simon's work on three-variable models into a means for testing for the existence of linkages between recursive models with multiple variables. As

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39 Ibid.

40 Asher, op. cit., p. 15.

41 Ibid., pp. 16-18.
Asher explains:

The basic steps in the Simon-Blalock technique are to construct a model, often in the form of an arrow diagram, observe where the linkages between pairs of variables have been omitted, and generate predictions that certain partial correlation coefficients involving those pairs of variables should go to zero. One then calculates the actual value of the partial correlation, compares it to the predicted value, and on the basis of the comparison makes a decision about whether the linkage is to be omitted or not.42

The Simon-Blalock technique requires the same set of assumptions as does conventional regression analysis; however, the return is very limited. The researcher learns whether a linkage should be included or not on the basis of decision rules that are inevitably arbitrary, i.e., how large must be the difference between actual and predicted partial r's to include the linkage? In addition, the process of model revision is somewhat mindless, since Simon and Blalock provide no test for the direction of causality; such revision may lead to a final model with no omitted linkages. This would mean that no predictions or tests of zero linkages would be possible.

For these reasons, path analysis, which makes the same initial assumptions, is a far richer source of information. In addition to its usefulness as an heuristic device or as an aid to theoretical speculation, path analysis enables one to measure both the direct and indirect effects of one

42Ibid., p. 20.
variable on another, and to sum for the total effect. It also allows the decomposition of the correlation between any two variables into a sum of simple and compound paths, some of which may be substantively meaningful indirect effects and others not. Each procedure provides additional information about the causal processes.

As Tompkins says:

Path analysis procedures avoid a pitfall . . . the use of statistical criteria alone to assess the importance of independent variables. By studying a set of variables in the context of their causal interrelationship, path analysis enables the researcher to approximate more closely the complexities of human behavior.

Consider the following path diagram, based on state policy studies and presented at a very high level of generalization:

Environment $\rightarrow$ Policy

$\downarrow$

Political System

The diagram shows that the environment affects both policy and political system characteristics, but that the political system has a direct impact on policy only partly attributable to the effect of environment on it. The utility of path analysis is that it permits estimation of direct and indirect effects.

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44 Ibid., p. 33.
45 Tompkins, p. 405.
It is evident, however, that this model is far too general to be tested. Operational indicators for the key concepts must be found and related to one another before the underlying processes can be understood. To do this it is necessary to conceive of the causal sequence these processes might take, studying each part of the entire process separately, before considering the whole.

Thus, working backward from the ultimate dependent variable of policy, it could be hypothesized that inter-party competition must be present before a change in redistribution might occur, even in the presence of sufficient economic development to create the resources for redistribution. But what causes party competition? In the South, at least, a change in electoral participation and partisan preference is likely to be a prerequisite. The next question becomes what causes that change? The answer suggested by prior studies is that economic development (industrialization and urbanization) stimulates higher incomes and higher levels of education. These changes in turn operate to increase turnout, drawing in the have-nots of traditional politics, and also create the preconditions for Republican voting, associated at the individual level with middle-class professional occupations and higher incomes.

As this verbal formulation suggests, tracing causal paths back in time can become complex quite rapidly and it
seems wise to begin with a relatively simple model. Therefore, instead of trying to deal with the whole sequence at once, from policy back to the environment, this study will focus only on the effects of environmental change on political system characteristics, specifically inter-party competition. Competition is such a crucial intervening variable in the overall hypothesis that specifying the relationships between the environment and IPC is a necessary first step to building the final model.

Research Design

The Model

The test model will be the one shown in Figure 2, which posits direct relationships between the exogenous variables of industrialization and urbanization and the intervening variable urbanism, and indirect relationships between those three variables and party competition through the mediating variable of participation. A direct relationship between urbanism and competition is also predicted.

This model shows only the predicted non-zero paths, not every path possible. In this formulation, the impact of the processes of urbanization and industrialization is expected to be mediated through urbanism and changes in participation. Urbanism itself is expected to have both a direct and indirect effect on party competition, as well as a direct effect on participation. All relationships are expected to be positive.
WHERE:  
\( U_1 \) = urbanization  
\( U_2 \) = urbanism  
\( I \) = industrialization  
\( P \) = participation  
\( IPC \) = inter-party competition

Fig. 2—Test model explaining inter-party competition

It is obvious, to anyone familiar with the writings on economic development and political change, that this model is greatly over-simplified. McCrone and Cnudde, for instance, might suggest that communications be included, since widespread communications seem to be requisite to mass participation. Other writers might suggest additional variables.

However, the model does include the major relationship which seem to be widely supported in the literature. By beginning with crucial variables, it will be possible to see whether the major relationships predicted by the theory hold up. If these are unsupported, including less important variables would reveal little. Additionally, if the environmental variables have the substantial impact expected, the addition of less important variables would only
marginally increase the model's explanatory power. Thus, both to achieve the advantages of parsimony and to get the clearest look at the relationships between the primary variables, this study has elected to begin with a greatly simplified model.

It might also be noted that industrialization and urbanization (the two process variables) are exogenous; that is, it is assumed that they affect the other variables in the model but are not affected by them. Moreover, because both are exogenous, the correlation between them will not be analyzed. This is so because in the South of the fifties, sixties and seventies, it would be very difficult to specify a time sequence in which one variable could realistically be said to precede the other. Moreover, the relationship between the two may well be interactive, a possibility beyond the scope of path analysis. Since it is not crucial to the theory to separate the two in some causal sequence, both are specified as exogenous.

Questions might be raised about the inclusion of two urban-type variables: urbanization, representing the process, and urbanism, representing the attribute. In much political science research, such a distinction is not made, although the two concepts are logically distinct and might therefore be expected to have different impacts on the dependent variables. Urban sociologists distinguish between urbanization, the increasing population in a given area,
and urbanism, the values, customs and "way of life" associated with great population concentrations. As Meadows and Mizruchi comment:

. . . let us view urbanism as a cultural phenomenon, the outgrowth of the interplay between technological and social processes. It is a pattern of existence which deals with (1) the accommodation of heterogeneous groups to one another; (2) a relatively high degree of specialization in labor; (3) involvement in non-agricultural occupational pursuits; (4) a market economy; (5) an interplay between innovation and change as against the maintenance of societal traditions; (6) development of advanced learning and the arts; and (7) tendencies toward city-based centralized governmental structures. . . . Urbanization refers to the processes by which (1) urban values are diffused, (2) movement occurs from the rural areas to the cities, and (3) behavior patterns are transformed to conform to those which are characteristic of groups in the cities.46

So the rationale for including both urbanization and urbanism in the model is that we are here concerned with change over time, and both urbanization and the development of urban culture should lead to political consequences. Another point is this: in much of the urbanization-party competition literature, it is the term urbanization which is used, implying that it is the process which matters. Yet a closer look at the theory suggests that it is urbanism which is the key variable; that is, urbanism should be the most important variable, if the hypothesis tested in so much of the literature is correct. It is not

the sheer concentration of numbers of people which increases the likelihood of party competition, but rather the development of a secular, heterogeneous culture whose bearers internalize the norms of group competition and develop the educational base which underlies political activity. Logically, then, urbanization must precede urbanism, which stimulates changes in participation, leading to party competition, justifying the temporal sequence in the test model.

The Data

The focus here will be on three levels of electoral competition: presidential, gubernatorial and congressional. While the change in southern voting habits has perhaps been most marked in presidential races, long-term systemic change can only come about if state Republican parties begin to contest and win state elections. The fact that these offices are filled from different electoral bases allows a more localized measure of party strength and, ultimately, party competition than does the presidency.

As Gold and Schmidhauser comment:

... in a state, the vote for governor or senator is a more accurate gauge of party strength in the state than is the vote for President. The campaign for governor or Senator is almost entirely dependent upon partisan efforts rooted in the state, whereas the
campaigning for President within a state is not solely dependent upon local state efforts.\textsuperscript{47}

In this study, the Presidential vote represents changes at the level of national party loyalties. While the phenomenon of presidential Republicanism--voting for the GOP in presidential elections while maintaining Democratic loyalties for all other offices--is well-documented in the South, questions remain whether Republican voting is beginning to trickle down to the level of statewide and more localized races, and whether the processes presumably operating at the national level are the same farther down.

Presidential elections, then, represent national-level changes. Gubernatorial elections represent statewide patterns, and congressional campaigns an even more localized reflection of changes in the relative competitiveness of the two major parties.

All presidential elections between 1952 and 1976, with the exception of 1968, will be examined. The three-party 1968 election is omitted because of the substantial vote for Wallace, maximal in the South, and because he was listed as a Democrat on more than one southern ballot, thus making the definition and computation of party competition scores somewhat ambiguous.

It might well be argued that the presidential elections of 1960, 1964, and 1972 were no less deviating than 1968, and ought to likewise be omitted. After all, the issue of Kennedy's Catholicism was important in 1960, especially in the fundamentalist South, and the landslides of 1964 and 1972 certainly give no good example of party competition. However, omitting all four elections would leave little to study, and whatever information these elections might reveal is potentially important enough not to rule them out prematurely.

The clearest test of the model, however, will no doubt come from gubernatorial and congressional elections during the same time period. Unlike national campaigns, where southern voting has shown an extreme volatility over the last thirty-odd years, lower-level elections should be more reflective of long-term processes which are altering the environment of southern politics.

The analytical units for this study will be all the counties or county-equivalents in the eleven states of the historical South. These include Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas and Virginia. Of these states, Virginia alone has developed administrative units, termed independent cities, which are not included within any county organization. These will be treated as counties on the presumption that there is no significant difference for the purposes of this analysis.
The use of counties has been criticized because they contain a variety of ecological structures and do not constitute "communities" in any intuitive sense of the term. However, for the reasons cited by Bonjean, Browning and Carter, counties are still the best available units of analysis:

(1) the county is the one administrative unit smaller than the state for which the greatest amount of comparable data, both ecological and electoral, is available;

(2) using only city data would eliminate the rural population, an unjustifiable, systematic exclusion of relevant data;

(3) the political, social, economic, cultural and functional boundaries of cities and villages are no more clear than county boundaries. 48

As an additional way of examining the patterns, the South will be subdivided into the Deep and Outer South, and these subregions will be compared. A state-by-state sub-regional analysis will also be conducted for those electoral races where states choose governors at different times or intervals. The expectation is that the relationships between the key variables should appear sooner in the

Outer South, which has surpassed the Deep South in both its ecological and its political change. The Deep South states include Alabama, Georgia, Louisiana, Mississippi and South Carolina, while the Outer South encompasses Arkansas, Florida, North Carolina, Tennessee, Texas and Virginia.

Electoral and census data used in this research were made available by the Inter-University Consortium for Political Research. The census data were drawn from the 1950, 1960 and 1970 censuses, as reported in the County and City Data Books for the appropriate years. The Consortium supplied the data in partially proofed form and bears no responsibility for either the analyses or the interpretations presented.

**Operational Indicators**

The fact that the South is historically a one-party Democratic area must be carefully weighed before choosing operational indicators for the test model. Elsewhere in the nation, Democratic voting is generally associated with low to middle-income voters, ethnic minorities and blue collar workers. In the South, however, Democratic voting has been a cultural rather than socio-economic phenomenon, with upper-class white professionals as well as the lower strata voting and identifying with the regional Democratic party.
Until recently, then, especially at levels of competition below the Presidency, this meant that the groups voting Democratic included those whose SES characteristics would seem to predispose them to vote Republican. The minority status of the southern Republican party, as well as historical party loyalty, made the Democratic party the party of the well-to-do, at least at the level of non-presidential politics.

This has implications for an attempted specification of the process by which party competition may be developing in the South. Were the South a one-party Republican area with a pattern of low participation among blacks and poor whites, the urbanization process might be expected to increase the vote of the Democratic party, thus creating party competition, as Coulter and Gordon suggest.\(^{49}\) However, since Republicans are the southern minority, mobilization of the out-groups, who would be expected to support the Democrats, would only increase that party's hegemony, unless upper-status groups began to vote Republican. In other words, it is not likely that the mobilization of blacks and poor whites would benefit the GOP directly, since they are not likely to vote Republican.

\(^{49}\)Philip Coulter and Glen Gordon, "Urbanization and Party Competition: Critique and Redirection of Theoretical and Research," *Western Political Quarterly*, XXI (June, 1968), 274-278.
But Republicans could benefit indirectly, if such groups managed to gain control of the Democratic party locally as they have nationally, pushing the upper-status whites into the Republican party where they more logically belong.

For this reason, choosing an indicator for urbanism must be done with care. In many studies, percent foreign-born has been the measure of choice. It represents the heterogeneity of the urban milieu and is quite appropriate in areas of the country like the Northeast where immigrants and their offspring have tended to settle in large cities. However, such is not the case in the South. Except for Florida and perhaps Texas, there are few voters who would fall into such a category. Additionally, the largest group of outs, blacks and Mexican-Americans, are not foreign-born, but native, so using percent foreign-born would leave them out entirely.

Also, since it is an increase in the proportion of those voters likely to vote Republican which could be expected to affect party competition, some measure is needed which captures that aspect. Several indicators of this type were available, including percent white collar, median income and the percent of the over-twenty-five population with four years or more of high school.

Since all of these measures rather clearly reflect social status, there seemed no a priori reason for preferring one to the other. Urbanism and industrialization, at
least in the U.S. case, do require a relatively well-educated population, as does participation. But higher levels of education tend to be associated with higher median incomes, as well as with white collar employment.

As a way out of this dilemma, all three measures were correlated with total population in counties have a population of 200,000 or more, to see which of the status indicators might also reflect urban residence. The results of the correlation are shown in Table I in the appendix. For all three censuses, the education measure is the most consistently related to population size.

The choice of education as a measure of urbanism has some intuitive consonance with common ideas about the urban milieu. As the quote from Meadows and Mizruchi showed, urban culture depends in part on an increase in both the spread and level of education. The specialization of labor requires an educated work force capable of performing many different tasks. Moreover, at the individual level, political participation increases with education, as do feelings of political efficacy. Therefore, we might reasonably expect the education measure to be more closely tied to the kinds of processes important to this hypothesis than either percent white collar or median income, which are less directly related. Additionally, education is clearly a social status variable, loading high on that factor in several factor analyses of cities and counties.
Social status is one dimension along which cities differ from rural areas, with education being an important component of that factor.\textsuperscript{50}

Choosing indicators for the two exogenous variables was less difficult; since both must represent a process, rather than an attribute, change measures were selected. In this study, industrialization will be represented by the percent change in the manufacturing sector of the county labor force. In the South, manufacturing is not always associated with urban settings, but is often found in comparatively rural areas, due to the availability of cheap land, cheap labor and local tax breaks. However, manufacturing does represent the movement from agricultural or extractive occupations into secondary industries. A manufacturing measure thus implies a transitional stage between a predominantly agricultural work force and the development of substantial employment in tertiary occupations more characteristic of urban areas. Percent change was chosen for the reasons cited by Van Meter: it is a better measure than a simple gain score, since it controls for the base, and is appropriate when using numbers with no fixed upper limit.\textsuperscript{51}


\textsuperscript{51}Van Meter, op. cit., p. 136.
Urbanization will be indicated by a percent change in the total county population. One often-used measure of urbanization which was not selected was census urban, the percentage of the population residing in an urban place. The census defines as urban any incorporated place or fringe area of 2,500 or more, but the definition has little theoretical or empirical validity; indeed, it overstates the proportion of the population actually resident in the urban milieu. Factor analyses of counties and towns of various size have shown that census urban loads high on social status measures, and low on measures representing "urban" or "urbanization." 52 Thus, there is little empirical support for using census urban. Total population, on the other hand, does load high on these factors and thus is a good choice to represent the process of population concentration.

One problem with using census data, of course, it that it is only available at ten-year intervals, which means that using 1960 ecological data for the 1968 election might give results that are at the very least misleading. Also, using the same figure for a series of elections seems hard to justify, since the measure would get progressively out of date.

To avoid this problem, appropriate figures for each election year will be constructed by using the average annual change between censuses to update the base data. That is, to derive the number employed in manufacturing in 1968, the average annual change between 1960 and 1970 will be calculated. That number will be multiplied by eight (for eight years) and added to the number employed in manufacturing in 1960. This extrapolation will be performed for all variables derived from census data, to make them more closely approximate actual figures at the time any given election is held.

For the exogenous variables, which indicate processes rather than attributes, percent change will be calculated by using as \( t_1 \) the election year immediately preceding the one being analyzed. Thus, if the 1964 presidential election is being analyzed, \( t_1 \) will be the 1960 figures and \( t_2 \) will be the extrapolated 1964 figure. For the 1968 election, \( t_1 \) will be 1964 and \( t_2 \) will be 1968.

The participation indicator is the percent turning out to vote in any given election. This is measured by using as the base the number of potentially eligible voters, that is, the number of those in the county who are of minimum voting age. Since the number actually registered to vote was not available, the other figure had to be chosen, but there are some reasonable justifications for doing so. For one thing, using the number of potentially eligible
voters will deflate turnout rates in the years prior to 1965, when few blacks were able to vote in the South. Thus, in post-1965 elections, the turnout measure will reflect more accurately the entry of black voters into the electorate.

Of course, such a gross measure does not reflect who is entering the electorate in any real sense. The new voters might be blacks, or whites responding to the challenge of newly-enfranchised blacks, or in-migrants from other parts of the country, or all three groups. The turnout figure shows none of this; nor are more precise measures available. However, calculating turnout from the base of all who are potentially eligible will more accurately show the increase in turnout due to the entry of whatever new groups are beginning to participate. By calculating participation from the number of those legally eligible to at least register, the entry of any new voters will show up. Using turnout as a percentage of those registered might actually show a decrease in turnout after 1965, since the groups entering the electorate after that time tend to have lower rates of participation than the groups who were already voting.

Party competition is measured as 100 minus the absolute difference in the Democratic and Republican vote percentages in any given election. This yields a scale running from zero (total lack of competition) to 100 (perfect competition).
It follows Pfeiffer's suggestion that such a measure, while not reflecting the competitiveness of the system over time, does capture the competitiveness of a single election. Since the focus here is on a system in the midst of change from non-competition to competition, it seems sensible to look at the competitiveness of elections, rather than the system as a whole.

The substantive part of this research will be presented in the next three chapters. Chapter III will be concerned with presidential elections, Chapter IV with gubernatorial races, and Chapter V with congressional campaigns. Path models for each of the subregions will be presented. In this way, it will be possible to take an in-depth look at the patterns of change in southern electoral competition.

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53Pfeiffer, pp. 457-467.
CHAPTER III

PRESIDENTIAL COMPETITION IN RECENT SOUTHERN POLITICS

Introduction

Following the research design laid out in Chapter II, ecological data and presidential votes for all the counties in the southern states were subjected to path analysis in the following manner: the first set of regressions were run on all counties, divided into sub-regions, except those with a pattern of historical Republican support. Operationally, these were defined as counties giving 33.0 percent or more of their vote to the republican party in the presidential election of 1936, Roosevelt's landslide. It was felt that the hypothesis could best be tested by eliminating those counties where GOP voting, and thus party competition, could be attributed to causes other than urbanization and industrialization.

As Key and Munger noted some time ago, "standing decisions", once made, tend to persist "... despite changes in 'interest' and the disappearance of issues that created a pattern . . ."\(^1\) Therefore, one would expect that

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in the mountain Republican counties of Tennessee and the
German counties of Texas, the reasons for increases in GOP
voting might have more to do with the augmentation of
persistent patterns than with the influence of ecological
change. Eliminating such counties from the analysis
removes a possibly confounding factor.

Preliminary path diagrams were then drawn from the
results of these first regressions. Again, following
customary procedure, a second set of path regressions was
done, omitting any variable which had no direct or indirect
non-zero path connecting it with the ultimate dependent
variable, IPC. The final diagrams are shown in Figures
4 and 6.

Then, to examine the possibility that a non-linear
model might better approximate the relationship between the
independent variables and competition, the common log
transformation was employed. That is, the data were trans-
formed by taking the common log of each variable, and the
same sequence of regressions were then performed on the
transformed data. The diagrams resulting from this analysis
are shown in Figures 5 and 7.

This procedure is usually employed when there is reason
to suspect that the data are not linearly related, as the

2Otis Dudley Duncan, "Path Analysis: Some Sociological
Examples," in Causal Models in the Social Sciences, edited
by H. M. Blalock Jr. (Chicago: Aldine-Atherton, 1971),
p. 123.
regression model assumes. Using the log of the variables transforms them into new variables for which the assumption of linearity is accurate. This permits greater reliance on the results of the regression analysis than would be possible when using a linear model on non-linear data.  

There are suggestions in the literature that this transformation may more closely approximate actual relationships between these variables than the ordinary linear model, which assumes that the rate of change in the dependent variable relative to the independent variables remains constant for all values of Y. It seems reasonable, however, to suspect the presence of a "threshold" effect. That is, below certain unspecified levels of development, variations in competition might be linearly and constantly increasing with changes in the environmental variables. But once the threshold facilitating competition is crossed, IPC might then increase or decrease geometrically.

The most logical expectation is a decrease after the threshold is passed. For example, participation is expected to be related to IPC in the manner of a curve with a gradually decreasing rate of change, as described by Broach.

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5 Ibid.
In real world terms, this would mean that the increase in competitiveness gradually decreases as the upper bound of participation is reached. Even in low-turnout states like those of the South, perhaps it only takes increases in participation to a certain level to stimulate competition. Once the optimal level is reached, further increases are not likely.

We posit here that all these relationships are of that form: tapering off after reaching some threshold. As a preliminary check of this theoretical suspicion, all these variables were plotted against one another. This revealed a relationship like the one shown in Figure 3: rather linear to a certain level, then curving gently off to the right. This is similar enough to Broach's curve with a gradually decreasing rate of change to justify using the double log transformation rather than other possibly more elegant, but certainly more complex and less interpretable, equations.

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Fig. 3--General form of scatterplotted relationships between all variables in path analyses of presidential elections.
The object of these analyses is to resolve the following questions:

1. Is the model as predicted?
2. Do urbanization ($U_1$) and industrialization ($I$) impact equally on urbanism ($U_2$)?
3. Is urbanization or urbanism the most important variable, in terms of total effects, or is some other variable more important?
4. Is participation the key intervening variable, as the theory suggests, or is it not significant, as others have found?\(^6\)
5. Is the non-linear model a better fit than the linear one?
6. Is the pattern of relationships consistent from election to election and in both sub-regions?
7. If the patterns change, what might be the explanation for this?

The remainder of this chapter will be devoted to answering these questions.

Analysis

The Outer South

As Figure 4 shows, the results for the Outer South are only partially consistent with the posited model. There is some support for the major link between urbanization and IPC through urbanism, but industrialization is evidently not an important variable. It remains in the analysis only in the landslide year of 1972 and again in 1976, but even then, as Table I shows, its influence is minimal: .05 in 1972 and .07 in 1976. This may indicate

that industrialization is beginning to be important in the later years, or its inclusion may be due to some idiosyncracy of these two elections.

Another interesting result is the non-importance of participation. Only in 1964 does P remain in the analysis, and in that election, Lyndon Johnson's landslide, its influence slightly exceeds that of urbanization, .21 vs .20. However, since this is the only election of the six in which P is significant, it seems at least reasonable to suppose that the nature of the 1964 election may have more to do with its inclusion than anything else.

In the other elections, with the exception of 1976, a rather clear pattern emerges, which supports at least part of the theoretical linkage between the process of urbanization, the culture of urbanism and party competition. Urbanization does impact on urbanism, as expected, and urbanism directly affects IPC. This is the pattern, with some modifications, in every election except 1976. In that case, urbanization drops out, industrialization remains, but the main path is that connecting urbanism with IPC.
Fig. 4—Final path diagrams for the Outer South* using the linear model.

The answers to the second and third questions, then, are that urbanization and industrialization do not impact equally on urbanism, nor on party competition. Urbanization is clearly the more important of the two process variables,
while the most important variable in terms of total effects is urbanism. It can be concluded from this that, at least for the Outer South, it is the culture of urbanism which directly affects party competition. Participation is not a crucial intervening variable, and the influence of the others that remain in the models is minimal, compared with that of urbanism.

The next step in the analysis is the investigation of the non-linear model. The diagram resulting from this is shown in Figure 5. Interestingly, the final models for both linear and non-linear data for the elections of 1952 through 1960 are the same. However, they differ to varying degrees in the later three elections. But as Table II shows, the explanatory power of the model, as measured by the $R^2$, is greater than that of the linear in four of the six elections. For the elections of 1952 and 1964 through 1976, the $R^2$ improves anywhere from .01 to .0347. While this is not an outstanding improvement, particularly given the low explanatory power generally, it does suggest that some sort of threshold may be operating, and those researchers who see more legitimacy in non-linear models may be on solid ground.7

Again, as was the case with the linear model, industrialization is eliminated from the analysis in all but two elections, 1964 and 1972. However, as with the linear model, the total effect of I is quite small: .06 in 1964 and .03 in 1972, which suggests again that it is not a very important contributing force to IPC. Also, once again it is urbanism which is the most influential variable, except in the 1964 election, where urbanization is the most important by far, in terms of total effects. In the other elections, urbanism's effect is approximately twice as great as that of any other variable.

Participation also is dropped from the analysis in the first three elections, as well as in 1976, but it shows up as fairly important in 1964 and 1972. Since these were both landslides, it may be that the peculiarities of each made participation meaningful; aggregate data offer no explanation of why participation should have an important intervening effect in these years but not in others.

The main conclusion to be drawn from these results are that there is some support for the linkage of urbanization and party competition through the mediating variable of urbanism. This pattern appears and persists in every election for the non-linear model and every election except 1976 for the linear model. The elections of 1964 and 1972, while repeating the pattern, also show the impact of other variables, but the fact that the pattern
Fig. 5--Final path diagrams for the Outer South* using the common log transformation.

*Presidential elections from 1952 through 1976, except 1968.
reverts in 1976, a more "normal" election, suggests that the landslide years were aberrations, rather than changes in the pattern of influences.

On the other hand, industrialization does not seem to have the important impact expected. It is not important at all, in fact, except in the two unusual elections. Participation also proves not to have the intervening place attributed to it by the theory of urbanization-party competition. It maybe, as Tompkins speculates, that competitiveness is partly influenced by the perceptions of the actors.\(^8\) If party regulars think that changes in the electorate have improved the odds, they may begin to field more candidates and put more resources into campaigns. Competition thus becomes something of a self-fulfilling prophecy. Aggregate data, of course, shed no light on individual or party motivations, thus this explanation cannot be tested here.

Overall, then, at the level of presidential politics, the Outer South has shown over time a rather consistent pattern of urbanization affecting urbanism, which in turn affects the competitiveness of a given election. This part of the original model holds up. The next step is to see whether the same thing occurs when the Deep South is the focus.

\(^8\)Tompkins, p. 403.
The Deep South

Figure 6 shows the linear model which resulted from analyzing data from the five states of the Deep South. Again, as was the case with the Outer South, only part of the original model is supported by these results. The major linkage between urbanization and IPC through urbanism remains for the 1952 through 1960 elections, but in 1964, participation intervenes between urbanism and competition. In 1972 a rather different pattern appears: urbanization affects participation, which affects competition. But urbanism has no impact, nor does industrialization. In 1976, nothing has an influence, as the $R^2$ of less than one percent would lead us to expect.

Urbanism is the most important variable, in terms of total effects, for the first three elections, but in 1964 and 1972, participation assumes first place (see Table I). Industrialization remains in the diagrams in only one election, that for 1964. Regardless of sub-region, 1964 appears to be an odd year. The negative relationship between participation and urbanism and between participation and party competition may be explained by the nature of the election. As Strong and Cosman have both shown, the

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Fig. 6—Final path diagrams for the Deep South* using the linear model.

Goldwater candidacy reversed the usual pattern of support for Republican candidates. Goldwater's support came from the rural areas of the Deep South, not from the cities, where Nixon and Eisenhower had done well. Participation in those areas might have been greater because of Goldwater's unusual appeal; this might account for the unexpected negative relationship. The inverse coefficient between participation and IPC makes more intuitive sense. In a landslide election where the traditional majority party wins overwhelmingly, it seems reasonable that greater turnout would be associated with decreased party competition.

Figure 7 shows the final non-linear diagrams. The most noticeable area of difference in the 1976 election, where the non-linear model explains nearly 19 percent of the variance, in contrast to the less than one percent explained by the linear model. As was the case with the Outer South, the non-linear model improves the fit in four of the six elections. The difference is minimal in the 1956 election, .0785 to .0744, but in the other elections, the increase is from three to 17 percent. For both sub-regions, the non-linear model is better than the linear one, except for the elections of 1964 and 1972 in the Deep South, and 1956 and 1960 in the Outer South (see Table II). Again, especially for the Deep South states, it seems likely that certain levels of economic development would have to be reached before competition would begin to appear in any
Fig. 7—Final path diagrams for the Deep South* using the common log transformation.

*Presidential elections from 1952 through 1976, except 1968.
substantial way. These results offer some confirmation of that.

**TABLE II**

**COMPARISON OF LINEAR AND NON-LINEAR MODELS**

**IN TERMS OF MULTIPLE $R^2$**

<table>
<thead>
<tr>
<th>Year</th>
<th>Outer South Linear</th>
<th>Outer South Non-Linear</th>
<th>Deep South Linear</th>
<th>Deep South Non-Linear</th>
</tr>
</thead>
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<tr>
<td>1952</td>
<td>0.0916</td>
<td>0.1020</td>
<td>0.1348</td>
<td>0.1740</td>
</tr>
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<td>1956</td>
<td>0.0717</td>
<td>0.0716</td>
<td>0.0889</td>
<td>0.1411</td>
</tr>
<tr>
<td>1960</td>
<td>0.0779</td>
<td>0.0669</td>
<td>0.0744</td>
<td>0.0765</td>
</tr>
<tr>
<td>1964</td>
<td>0.1339</td>
<td>0.1686</td>
<td>0.0635</td>
<td>0.0485</td>
</tr>
<tr>
<td>1972</td>
<td>0.1063</td>
<td>0.1295</td>
<td>0.0689</td>
<td>0.0350</td>
</tr>
<tr>
<td>1976</td>
<td>0.1351</td>
<td>0.1408</td>
<td>----</td>
<td>0.1883</td>
</tr>
</tbody>
</table>

*Underlined $R^2$ are larger.

The basic pattern of relationships is very similar to the modal pattern of the Outer South: in every election but 1972, urbanization influences competition through urbanism. In 1952 and 1956, an additional path links urbanization to IPC through participation, and in 1972, participation is the intervening variable between both urbanism and industrialization.

Again, as has been the case with both linear and non-linear models for the sub-regions, industrialization has no great impact. In five of the six elections, as Table I shows, urbanism was by far the most important variable, in
terms of total effects. As before, this supports a major linkage in the original model, but allows what was assumed to be a crucial intervening variable, participation, to be dropped from the analysis in three of the six elections.

The fact that participation is related negatively to IPC in the first two elections but not in 1972 may be attributed to the fact that participation is measured as a ratio of actual votes to the potential electorate, which in the early years included blacks who could not vote. The greater the number of blacks, the lower the participation. In these elections, Eisenhower got his major support from the cities. Since the "blackest" counties were rural counties where Democratic vote was highest, the competition measure would be lowest there; thus the inverse relationship appears.

The 1972 result may be due to increased participation among blacks and other out-groups (relative to 20 years earlier, that is). Surveys have shown that McGovern, like other Democratic nominees, got a large share of the black and Mexican-American vote. In the Deep South of 1972, then, participation varied with what party competition there was.

Conclusion

Early in this research, the decision was made to examine these relationships at three different levels of elections: presidential, gubernatorial and congressional.
The presidential level, just analyzed, offers the advantage of holding constant candidates and issues, since they are the same for each state. The presidency is also a very visible campaign which motivates partisans to efforts that might not be as easily expended in lesser races; it is a sort of rallying point around which more extended efforts may be organized. In the South in particular, it has seemed as though changes in partisan allegiances were occurring in presidential campaigns, while loyalties farther down held firm.

For these reasons, the presidency offers a good beginning point for examining the relationship between party competition and the ecological processes of urbanization and industrialization, through the intervening variables of urbanism and participation. What this analysis has revealed is that some of the major linkages in the posited model do hold up over time in both sub-regions, notably the path from urbanization to IPC through urbanism. Urbanism, our surrogate for the urban culture, is the most important variable.

On the other hand, industrialization does not appear to be important, either in terms of the magnitude of total effects, of in terms of its being consistently included in the models. Participation as well does not appear to have the mediating influence expected, although it does enter into some elections. These are usually the odd, landslide
elections of 1964 and 1972, although participation does seem relatively important in the early elections in the Deep South. Overall, however, participation appears to be a weak link.

The final conclusion is that the non-linear model improves the "fit" of the regression line somewhat in eight of 12 elections. This improvement is not great, except in the 1976 election in the Deep South, but the fact that the linear model is weaker in eight cases, while it is substantially better only twice, indicates that non-linear models offer a better approximation of reality than the linear ones, at least with these data. The initial expectation of the presence of a threshold effect thus receives some confirmation here. In most elections, the socio-economic variables are clearly related to IPC according to the log transformation which describes a gradually decreasing rate of change. Once some threshold is reached, further increases in participation and party competition come more slowly as each approaches its upper bound.

The next step is to move from the national level to a statewide race, which depends more on local activity. If the same kind of pattern appears as the analysis is repeated for other kinds of elections, we can be more certain that this is in fact a useful model. Accordingly, the rest of this study will be devoted to analyzing the effects of environment on statewide races as well as those in even
smaller districts. Chapter IV will examine competition for governor's offices during the last quarter-century. Chapter V will look at competition for congressional seats during the same period.
CHAPTER IV

PARTY COMPETITION IN SOUTHERN GUBERNATORIAL RACES

Introduction

There is some reason to suspect that studies of presidential voting may reveal more about the national party system than about that of individual states, or even of regions and sub-regions. As Gold and Schmidhauser have argued, presidential campaigns are affected by national forces to such an extent that they are not really representative of state patterns.¹

Moreover, there has been a tendency for southerners to behave as "presidential Republicans" for some time. As Key found² and Strong later demonstrated more conclusively,³ southern voters have long had a habit of supporting the more conservative presidential candidate, i.e. the Republican, while voting the straight ticket for other


offices. For this reason, the development of more competitive politics in presidential campaigns might augur nothing for the spread of competition to other levels. Instead, the patterns shown in the last chapter might reflect only the South's response to national candidates and issues, rather than any sea change in its historical pattern of one-party politics.

However, it is also possible to think of the Presidency as a race which can exert an organizing influence on state party systems. That is, if voters can shake their historical and cultural allegiance at the level of the presidency, might this not weaken their partisan attachment sufficiently to permit defection in other races? This possibility could be capitalized on by those hoping to stimulate two-party competition, especially those who see in such movements as "Democrats for Ike" the likelihood of future conversions to the GOP.

In fact, some of the recent electoral returns suggest that perhaps there has been a trickle-down effect from Republican presidential candidacies. Rather than building from the grassroots up, it seems as though the Republican party in the South has won its successes first at the top with the election of a GOP governor here or a Senator there, and that such achievements have spurred the contest for other offices.
If this is the case, then examining the urbanism/urbanization-party competition hypothesis using gubernatorial returns should provide additional evidence concerning the relationship between ecological development and political change. If, as the research hypothesis suggests, the urbanization of the South has led to increased party competition, then the patterns revealed by studying presidential races ought to hold up for gubernatorial campaigns as well.

It is the focus of this chapter to ask, relative to gubernatorial elections, the same questions that were asked in Chapter III of the presidential elections:

(1) do the predicted relationships appear and persist?
(2) is urbanism the most important variable, in terms of total effects?
(3) is participation a key intervening variable?

In addition, this chapter will also examine the similarities and differences between the patterns which appeared in presidential voting and those that are revealed in gubernatorial election results. As before, all elections between 1950 and 1976 will be studied for the two sub-regions of the South, and these sub-regions will be compared to see whether differences exist. Also as in Chapter III, linear and non-linear models will be compared to test for the existence of a threshold effect.
Analysis

The Outer South

As was the case with presidential elections, the linear path diagrams of gubernatorial races (Figure 8) show results only partially and inconsistently congruent with the test model. In 1950 and 1952, industrialization is entirely omitted, as is participation in the earlier contest. There is an indirect path from urbanization ($U_1$) through urbanism to inter-party competition in 1950, but also a direct link between $U_1$ and IPC which was not part of the predicted linkages. In 1952 urbanization affects IPC indirectly through participation, but has no impact on urbanism.

Participation is again omitted in 1954, while the other relationships are as specified. In 1956 the pattern is complicated by the addition of direct links between urbanization and participation and urbanization and IPC. Otherwise the patterns are as predicted. The 1958 results replicate those of 1954, omitting participation entirely and showing negative links between industrialization-urbanism and urbanism-IPC. This is consistent with the signs in every election through 1960. Urbanism, contrary to the prediction of the test model, is always negatively related to IPC.

While the 1960 diagram repeats that of 1956, with the exception of a negative rather than positive connection
1950

\[ U_1 \rightarrow .36 \rightarrow U_2 \rightarrow -.25 \rightarrow IPC \]

\[ R = .2365 \]
\[ R^2 = .0559 \]
\[ N = 422 \]

1952

\[ U_1 \rightarrow -.33 \rightarrow U_2 \rightarrow -.26 \rightarrow IPC \]

\[ R = .3080 \]
\[ R^2 = .0949 \]
\[ N = 586 \]

1954

\[ U_1 \rightarrow .36 \rightarrow U_2 \rightarrow -.17 \rightarrow IPC \]

\[ R = .2212 \]
\[ R^2 = .0489 \]
\[ N = 546 \]

1956

\[ U_1 \rightarrow -.14 \rightarrow U_2 \rightarrow -.27 \rightarrow IPC \]

\[ R = .3209 \]
\[ R^2 = .1030 \]
\[ N = 334 \]

1958

\[ U_1 \rightarrow .53 \rightarrow U_2 \rightarrow -.19 \rightarrow IPC \]

\[ R = .2279 \]
\[ R^2 = .0519 \]
\[ N = 546 \]

1960

\[ U_1 \rightarrow .19 \rightarrow U_2 \rightarrow -.12 \rightarrow IPC \]

\[ R = .3077 \]
\[ R^2 = .0947 \]
\[ N = 334 \]

1962

\[ U_1 \rightarrow .16 \rightarrow U_2 \rightarrow -.15 \rightarrow IPC \]

\[ R = .1704 \]
\[ R^2 = .0290 \]
\[ N = 546 \]
Figure 8--Continued

1964

\[ \begin{align*}
U_1 & \rightarrow .33 \rightarrow U_2 \rightarrow .17 \rightarrow P \rightarrow .52 \rightarrow IPC \\
\text{R} &= .5511 \\
\text{R}^2 &= .3037 \\
N &= 334 \\
\end{align*} \]

1966

\[ \begin{align*}
U_1 & \rightarrow .34 \rightarrow U_2 \rightarrow -.17 \rightarrow P \rightarrow .39 \rightarrow IPC \\
\text{R} &= .4080 \\
\text{R}^2 &= .1665 \\
N &= 610 \\
\end{align*} \]

1968

\[ \begin{align*}
U_1 & \rightarrow .32 \rightarrow U_2 \rightarrow -.29 \rightarrow P \rightarrow .46 \rightarrow IPC \\
\text{R} &= .5062 \\
\text{R}^2 &= .2562 \\
N &= 270 \\
\end{align*} \]

1970

\[ \begin{align*}
U_1 & \rightarrow .29 \rightarrow U_2 \rightarrow .19 \rightarrow P \rightarrow .38 \rightarrow IPC \\
\text{R} &= .4161 \\
\text{R}^2 &= .1731 \\
N &= 610 \\
\end{align*} \]

1972

\[ \begin{align*}
U_1 & \rightarrow .21 \rightarrow U_2 \rightarrow -.23 \rightarrow P \rightarrow .51 \rightarrow IPC \\
\text{R} &= .5308 \\
\text{R}^2 &= .2818 \\
N &= 270 \\
\end{align*} \]

1974

\[ \begin{align*}
U_1 & \rightarrow U_2 \rightarrow .19 \rightarrow P \rightarrow .50 \rightarrow IPC \\
\text{R} &= .5099 \\
\text{R}^2 &= .2600 \\
N &= 175 \\
\end{align*} \]
Fig. 8—Path diagrams for gubernatorial elections in the Outer South, 1950-1976, using the linear model.
between $U_1$ and IPC, the 1962 model is quite different. Industrialization is not retained, nor is the direct link between $U_2$ and IPC. Instead, $U_1$ affects IPC through $U_2$ and subsequently $P$, while $U_2$ impacts on IPC only indirectly, through participation. The pattern is very similar in each election through 1970, with the addition of a direct $U_1$-IPC path in 1964, 1968 and 1970. A direct path from urbanism to IPC appears only in 1966 and 1970.

In 1972, the pattern becomes more complex with the addition of direct connections between industrialization and participation, and between industrialization and IPC. However, the $I-U_2$ path is not retained. In 1974 and 1976, both urbanization and industrialization drop out of the model, as does participation in 1976. Urbanism in 1974 is both directly and indirectly related to IPC, while in 1976 the only path retained is that between $U_2$ and IPC.

One interesting thing about these models is that the signs are generally opposite to those predicted. In the elections between 1950 and 1972, urbanism is inversely related to participation where that path appears, and is also negatively related to IPC until the 1966 election, when the connection becomes positive, as it remains for the later elections. Where industrialization is retained, it is negatively related to urbanism in all but one case, and is also negatively related to participation in 1972.
These models differ somewhat from those drawn on presidential election data in two important respects: participation is retained as an important intervening variable in ten of the 14 elections, and in the later elections, with the exception of 1976, it is the most important variable in the model in terms of total effects (see Table III). In the earlier elections, it is usually urbanism which is most important, or sometimes urbanization.

It may be concluded from these results, especially in the later elections, that there is some support for the original model linking urban-related variables to participation and then to party competition. The multiple correlation coefficients ($R^2$) are reasonably high in the post-1964 elections, indicating that the model explains a fair amount of variance in IPC. With the exception of the negative relationship between urbanism and participation, the other signs are as predicted and participation is, as specified, an important intervening variable between the environmental indicators and IPC. However, consistent with the presidential results of Chapter III, industrialization does not appear to be important, either in its impact on inter-party competition or on urbanism.

The next step in the analysis is to examine the nonlinear results created by means of the common log transformation. If the prediction of a threshold effect is accurate, these models ought to explain more of the variance
### TABLE III

**TOTAL EFFECT SCORES FOR GOVERNORIAL ELECTIONS, Comparing Sub-Regions and Linear vs. Non-Linear Models**

<table>
<thead>
<tr>
<th>Year</th>
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<th>Linear Deep</th>
<th>Non-Linear Outer</th>
<th>Non-Linear Deep</th>
</tr>
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<td>1950</td>
<td>.20</td>
<td>.16</td>
<td>.09</td>
<td>.09</td>
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<td>.15</td>
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*Again, the non-linear results for 1940-1974 were omitted because of unreliable results.*
than the linear ones displayed in Figure 8. Figure 9 shows the path diagrams which resulted from the log transformation.\(^4\)

Probably the most striking result is the improvement in the multiple correlation coefficient with the non-linear model (see Table II). In nine of the 11 elections where comparisons are possible, the log transformation improves the \(R^2\) anywhere from a miniscule two percentage points in 1954, to a difference of 59 percentage points in 1976. In the elections before 1962, the difference in \(R^2\) is not that great, but in the later four elections, the improvement is substantial. It is worth noting that it is also in these later election that the \(R^2\) for the linear models is a substantial 16 to 30 percent, except for 1976, while for the non-linear models it varies from a low of 26 to a high of 62 percent. This may indicate that 1962 marked a transition from a time in which none of these variables mattered very much to a time when, perhaps, some threshold had been crossed and the forces of urbanization, urbanism and participation began to have a substantial effect.

Indeed, for both the linear and non-linear results,

\(^4\) The diagrams for the non-linear analyses of 1970-1974 are omitted because the results included path coefficients of 31.29 and greater. This indicates either wildly skewed data or a problem in the packaged program used to do the log transformation. Since an examination of the raw data yielded no obvious explanation for these untoward results, no substantive interpretation was deemed appropriate, hence their omission.
1950

\[ U_1 \rightarrow -0.10 \rightarrow U_2 \rightarrow -0.15 \rightarrow P \rightarrow -0.21 \rightarrow IPC \]

\[ R = 0.2461 \]
\[ R^2 = 0.0606 \]
\[ N = 422 \]

1952

\[ U_1 \rightarrow -0.10 \rightarrow U_2 \rightarrow -0.38 \rightarrow P \rightarrow -0.12 \rightarrow IPC \]

\[ R = 0.2009 \]
\[ R^2 = 0.0404 \]
\[ N = 586 \]

1954

\[ U_1 \rightarrow 0.46 \rightarrow U_2 \rightarrow -0.29 \rightarrow P \rightarrow 0.33 \rightarrow IPC \]

\[ R = 0.3332 \]
\[ R^2 = 0.1110 \]
\[ N = 546 \]

1956

\[ U_1 \rightarrow -0.26 \rightarrow U_2 \rightarrow -0.29 \rightarrow P \rightarrow -0.31 \rightarrow IPC \]

\[ R = 0.3648 \]
\[ R^2 = 0.1331 \]
\[ N = 334 \]

1958

\[ U_1 \rightarrow -0.11 \rightarrow U_2 \rightarrow -0.17 \rightarrow P \rightarrow -0.20 \rightarrow IPC \]

\[ R = 0.2915 \]
\[ R^2 = 0.0850 \]
\[ N = 546 \]

1960

\[ U_1 \rightarrow P \rightarrow U_2 \rightarrow 0.11 \rightarrow IPC \]

\[ R = 0.1344 \]
\[ R^2 = 0.0181 \]
\[ N = 334 \]

1962

\[ U_1 \rightarrow -0.35 \rightarrow U_2 \rightarrow -0.35 \rightarrow P \rightarrow -0.21 \rightarrow IPC \]

\[ R = 0.2618 \]
\[ R^2 = 0.0685 \]
\[ N = 546 \]
Fig. 9--Path diagrams for gubernatorial elections in the Outer South, 1950-1976, using the non-linear model.*

*The years 1970-74 could not be analyzed due to problems encountered in using the packaged computer program which resulted in standardized betas of 31.29 and greater.
TABLE IV

COMPARISON OF LINEAR AND NON-LINEAR MODELS IN TERMS OF MULTIPLE $R^2*$ FOR GUBERNATORIAL ELECTIONS

<table>
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*Underlined $R^2$s are larger.

**Data for non-linear analyses for 1970-1974 are omitted because of unreliable results (see footnote 4).
participation becomes by far the most important variable after 1962, impacting strongly and positively on party competition, as Table III shows. Only in the linear model for 1976 is participation not important; there it is omitted entirely, as only urbanism is retained.

These results offer some confirmation for the existence of a threshold effect, both in the greater explanatory power of the non-linear model and in the fact that the patterns displayed change significantly, for both models, in the elections after 1962. This coincides with the passage of the Civil and Voting Rights Acts of 1964 and 1965, which made it possible, for the first time, for large numbers of blacks to enter the electorate and participate in politics. Since participation throughout is measured as total vote relative to potential vote (the population eligible to register), it is likely that the reversal of the sign on the participation-competition path in the later elections reflects the greater political activity of blacks in those years and possibly white activity in response.

As for the patterns themselves, and the question of whether they match those of the test model, again we see the addition of unpredicted linkages, especially between urbanization and participation and once between urbanization and IPC, as well as the omission of certain expected linkages, particularly between urbanism and IPC. As before,
industrialization is simply not important. In only three elections is it retained in the model, and its effect on IPC is negligible. Perhaps the most consistent connections are those linking urbanization to IPC through urbanism and participation, and the indirect path connecting urbanism to IPC through participation. These appear in eight of the 11 available non-linear path models.

What may be concluded, then, about the success of the urbanization/urbanism-competition model for the Outer South? As with the presidential elections in the previous chapter, some of the predicted linkages do appear on a fairly consistent basis. The non-linear model does explain more variance than the linear, indicating the presence of a threshold effect, i.e., a gradually decreasing rate of change once some transition point has been reached. In addition, 1962 appears to mark some sort of watershed after which participation shows an extremely strong and positive impact on IPC, intervening between the other variables just as the test model specified. Industrialization, as before, simply is not very important; it usually is omitted, failing to connect with the other variables with a path coefficient of at least .10.

It appears, then, with regard to gubernatorial races in the Outer South, that urbanization and urbanism do affect party competition, but through their impact on participation rather than directly. The next step is to compare these
results with those for a less-urbanized, less-industrialized area, the Deep South.

**The Deep South**

The linear diagrams for gubernatorial elections in the Deep South are shown in Figure 10. The patterns are quite different from those for the same election years in Outer South states and are also more complex, with the exceptions of 1952 and 1976.

In 1950, the model is almost precisely as predicted, except for the inclusion of a direct path from urbanization to participation. Again, however, the relationships between urbanism and participation, urbanism and IPC and industrialization and urbanism are all negative. Nothing is retained in 1952, as the $R^2$ of two percent would suggest.

The diagram for 1954 shows a more complex pattern, with the inclusion of direct links between $U_1$ and participation, industrialization and participation, and $U_1$ and IPC. Again the urban variables are negatively related to $P$ and IPC. A somewhat different pattern is shown in 1956 with the omission of participation from the model and the inclusion of direct links between urbanization and industrialization and IPC. Urbanism, however, is positively connected with IPC, although the $U_1$-IPC path shows a negative sign.

The 1958 results show a pattern similar to 1954, except for the omission of direct $U_1$-IPC and $I-U_2$ paths.
1950
\[
\begin{align*}
U_1 & \rightarrow .27 U_2 \\
& \rightarrow .23 P \\
& \rightarrow .15 IPC \\
I & \rightarrow -.23 U_2 \\
& \rightarrow -.26 P \\
& \rightarrow -.15 IPC
\end{align*}
\]
\[R = .3544, \quad R^2 = .1256, \quad N = 336\]

1952
\[
\begin{align*}
U_1 & \rightarrow .27 U_2 \\
& \rightarrow .23 P \\
& \rightarrow .15 IPC \\
I & \rightarrow -.23 U_2 \\
& \rightarrow -.26 P \\
& \rightarrow -.15 IPC
\end{align*}
\]
\[R = .1553, \quad R^2 = .0241, \quad N = 64\]

1954
\[
\begin{align*}
U_1 & \rightarrow .27 U_2 \\
& \rightarrow .23 P \\
& \rightarrow .19 IPC \\
I & \rightarrow -.11 U_2 \\
& \rightarrow -.26 P \\
& \rightarrow -.15 IPC
\end{align*}
\]
\[R = .3981, \quad R^2 = .1584, \quad N = 336\]

1956
\[
\begin{align*}
U_1 & \rightarrow .27 U_2 \\
& \rightarrow .23 P \\
& \rightarrow .19 IPC \\
I & \rightarrow -.11 U_2 \\
& \rightarrow -.26 P \\
& \rightarrow -.15 IPC
\end{align*}
\]
\[R = .3501, \quad R^2 = .1225, \quad N = 64\]

1958
\[
\begin{align*}
U_1 & \rightarrow .27 U_2 \\
& \rightarrow .23 P \\
& \rightarrow .14 IPC \\
I & \rightarrow -.11 U_2 \\
& \rightarrow -.26 P \\
& \rightarrow -.15 IPC
\end{align*}
\]
\[R = .4108, \quad R^2 = .1688, \quad N = 336\]

1960
\[
\begin{align*}
U_1 & \rightarrow .27 U_2 \\
& \rightarrow .23 P \\
& \rightarrow .14 IPC \\
I & \rightarrow -.11 U_2 \\
& \rightarrow -.26 P \\
& \rightarrow -.15 IPC
\end{align*}
\]
\[R = .2877, \quad R^2 = .0828, \quad N = 64\]

1962
\[
\begin{align*}
U_1 & \rightarrow .27 U_2 \\
& \rightarrow .23 P \\
& \rightarrow .14 IPC \\
I & \rightarrow -.11 U_2 \\
& \rightarrow -.26 P \\
& \rightarrow -.15 IPC
\end{align*}
\]
\[R = .2550, \quad R^2 = .0650, \quad N = 336\]
Figure 10—Continued

Fig. 10—Path diagrams for gubernatorial elections in the Deep South, 1950-1976, using the linear model.
In 1960 and 1962 the paths linking the environmental variables to the political ones are negative, except for the direct I-IPC link in 1962. Participation is related positively to IPC, as it has been throughout, and the $U_2^2-P$ path becomes positive for the first time in that year.

Three of the paths in 1962 are quite strong, the path coefficients ranging from .99 for the I-$U_2$ connection to -1.64 for the $U_2^2$-IPC link. While these numbers are not unheard-of for standardized betas, which like z scores can be as large as slightly more than 3.0, meaning three standard deviations from the mean, this is the only election in which relationships of such magnitude appear.

As was the case in the Outer South, there is an overall increase in the explanatory power of these models from 1964 onward. The greatest $R^2$ prior to 1964 was that for 1958, with 16.88 percent of the variance in IPC explained. The minimum $R^2$ for the post-1964 elections is 11.50 percent for 1972, and the greatest value is found in 1970, 29.64 percent of variance explained. As was the case in the Outer South, participation becomes the most important variable, showing a strong and positive path coefficient in all the later elections.

The same pattern, or lack of one, shown earlier persists in these later elections: some variables important to the hypothesis at issue are omitted from some diagrams, while other paths predicted to be zero are instead retained.
The most common linkage retained is between $U_1$ and participation, a relationship always negative in its sign. The $U_2$-$P$ path also is negative where it appears, with the lone exception of 1974, where a weak positive path is shown. In 1976, $I$ and $U_2$ are removed from the model entirely, and the only significant paths are those connecting $U_1$ to $P$ and $P$ to IPC.

Figure 11 shows the path diagrams for the non-linear analyses of gubernatorial elections. In seven of 11 available comparisons, as Table IV reveals, the non-linear model accounts for more of the variance than the linear one, and in most cases the difference between the linear and non-linear $R^2$s are quite large, ranging from a low difference of .005 to a disparity of .719 in 1968. On the other hand, where the linear $R^2$ is greater, the maximum difference is only .0903.

The post-1964 improvement in $R^2$ shown for the Outer South is not as noticeable here; four years prior to 1962 have approximately 25 percent of the variance explained in the linear cases, while 66.50 percent is explained by the log model for 1960, 79.30 percent for 1954 and 28.54 percent for 1958. Why the $R^2$ for these particular years should be so much greater than those of the surrounding election years is difficult to explain.

In 1960 the increase is apparently mainly attributable to the impact of participation, with a path coefficient of
1950

\[ U_1 \rightarrow 0.18 \rightarrow U_2 \rightarrow 0.55 \rightarrow P \rightarrow 0.37 \rightarrow IPC \]
\[ r = 0.3270 \]
\[ r^2 = 0.1069 \]
\[ N = 336 \]

1952

\[ U_1 \rightarrow 0.25 \rightarrow U_2 \rightarrow 0.32 \rightarrow IPC \]
\[ r = 0.4168 \]
\[ r^2 = 0.1737 \]
\[ N = 64 \]

1954

\[ U_1 \rightarrow 0.41 \rightarrow U_2 \rightarrow 0.36 \rightarrow P \rightarrow 0.92 \rightarrow IPC \]
\[ r = 0.8905 \]
\[ r^2 = 0.7930 \]
\[ N = 336 \]

1956

\[ U_1 \rightarrow 0.25 \rightarrow U_2 \rightarrow 0.46 \rightarrow P \rightarrow 0.14 \rightarrow IPC \]
\[ r = 0.2411 \]
\[ r^2 = 0.0581 \]
\[ N = 64 \]

1958

\[ U_1 \rightarrow 0.54 \rightarrow U_2 \rightarrow 0.21 \rightarrow P \rightarrow 0.40 \rightarrow IPC \]
\[ r = 0.5342 \]
\[ r^2 = 0.2854 \]
\[ N = 336 \]

1960

\[ U_1 \rightarrow 0.47 \rightarrow U_2 \rightarrow 0.25 \rightarrow P \rightarrow 0.86 \rightarrow IPC \]
\[ r = 0.8155 \]
\[ r^2 = 0.6650 \]
\[ N = 64 \]

1962

\[ U_1 \rightarrow 0.22 \rightarrow U_2 \rightarrow 0.76 \rightarrow P \rightarrow 0.24 \rightarrow IPC \]
\[ r = 0.2658 \]
\[ r^2 = 0.0706 \]
\[ N = 336 \]
Figure 11--Continued

Fig. 11--Path diagrams for gubernatorial elections in the Deep South, 1950-1976, using the non-linear model.*

*The years 1970-74 could not be analyzed due to problems encountered in using the packaged computer program which resulted in standardized betas of 31.29 and greater.
-.86 for the P-IPC link. The fact that this was a presidential election year in which the Democratic nominee was a Catholic may in part explain the negative sign. Kennedy lost the Deep South, but the voters who rejected him were traditional Democrats who might well have turned out to vote against a Catholic, but would vote for the Democratic gubernatorial nominee. If this is accurate, then, greater turnout would mean an increase in Democratic voting for governor and a corresponding decrease in party competition in that race.

Overall, the patterns seen before appear again in Figure 11. The most common retained linkages are those tying urbanism to participation and participation to competition. After that is the urbanization to urbanism path, and the direct linkage between urbanism and competition. Industrialization is retained in these models somewhat more often than in the models for the Outer South, usually affecting IPC indirectly through participation, but its impact, as shown in Table III, is minimal.

In terms of total effects, participation is the most important variable in the non-linear diagrams, just as it was for the linear ones. Next most important is urbanism, and then urbanization. Industrialization is of some importance, but is generally far outweighed by other variables where it does have impact.
Again we ask, what can be concluded regarding the urbanization-party competition hypothesis for the Deep South? For one thing, as was the case for presidential elections and the gubernatorial elections in the Outer South, there is some support for that part of the original hypothesis specifying that urbanization and its result, urbanism, do impact on party competition through participation. Participation, in fact, far more than was the case for presidential elections, is a crucial intervening variable for the Deep South, especially after 1964. Also, urbanism has a small and positive direct impact on IPC in the later elections, although its relationship to participation is consistently negative, which was not predicted by the hypothesis.

Conclusion

These path analyses for gubernatorial elections in both sub-regions of the South show a far greater amount of support for the original test model than did the results of presidential races. The linkages are somewhat more complex than originally specified, with certain direct links kept in the model unexpectedly, but most of the paths do show the expected link between urbanization-urbanism, urbanism-participation, participation-IPC and urbanism-IPC.

As was the case with the presidential analyses, industrialization is simply not very important; it is not often
retained in the models, and where it is, its impact is usually much less than that of the other variables. In contrast to presidential elections, however, participation does show up here as having an important intervening effect between the environmental variables and competition. It apparently does serve to translate socio-economic changes into political ones, as the hypothesis at risk here specifies.

The next most important variables are, first, urbanism, and then urbanization, again as the original hypothesis led us to expect. The one anomaly is the negative sign on the path linking urbanism to participation. An explanation for this may be found in individual-level motivations in each of the southern states; these aggregate data suggest no easy explanations.

The sharp break shown in the post-1962 gubernatorial elections is not evidenced as clearly in the presidential results. Some change in the pattern is shown for 1964 and after, but it is inconsistent and certainly not the same pattern as the post-1962 gubernatorial analyses reveal.

The non-linear analyses explain, overall, more of the variance than do the linear ones. This was also the case with presidential elections, but the differences were not as great. In fact, the multiple correlation for presidential elections was generally fairly low, reaching a high of 18.83 percent for the Deep South and 16.86 for the Outer
South only once. In contrast, the greatest $R^2$ for gubernatorial elections was 61.78 percent in the Outer South and 92.41 for the Deep South.

The fact that the resulting path diagrams are more consistent with the test model for gubernatorial than presidential elections, and explain more variance, suggests that Gold and Schmidhauser may be right: the campaign for the Presidency reflects short-term national issues and efforts, while gubernatorial campaigns are influenced by what is happening within the state.\textsuperscript{5} There probably is some interaction between presidential Republicanism and support for GOP gubernatorial candidates. But insofar as the effects of ecological change on political patterns is concerned, the impact is apparently greater below the rarified level of presidential politics.

To further examine these results, Chapter V will analyze elections whose candidates represent even smaller groups of voters than do governors. We turn in Chapter V to congressional elections between 1950 and 1976.

\textsuperscript{5}Gold and Schmidhauser, pp. 73-74.
CHAPTER V

PARTY COMPETITION FOR SOUTHERN CONGRESSIONAL SEATS

Introduction

The congressional elections analyzed here offer a look at the development of party competition at a sub-state level. Although congressmen are representatives to a national legislature and respond to national party loyalties and national issues, at least on occasion, they are also very much local representatives serving local needs. Much of their time and energy, in fact, is spent on "casework," individualized attention to complaints or requests for help from constituents.

Moreover, those who desire to develop a competitive party system are likely to focus their efforts first on congressional races, rather than state legislative ones. A Republican state legislator is often sadly outnumbered in southern state capitals, but a Republican congressman has a good chance to affect public policy. The appeal is often made, in fact, that it is the "Democratic Congress"

1Lewis A. Froman, Jr., Congressmen and Their Constituencies (Chicago, 1963), Table 7.1, p. 91. See also Aage R. Clausen, How Congressmen Decide (New York, 1973), pp. 119-149.
which is responsible for creeping welfarism and other social programs; the idea of sending a conservative Republican congressman to Washington finds a ready hearing among conservative white southerners who are disenchanted with the national Democratic party. Thus congressional campaigns may offer a greater possibility of a successful race.

Additionally, electing a Republican to Congress requires some kind of state party organization, whereas state legislators, representing smaller districts, often win office on the basis of their personal appeal, rather than depending on party backing. Congressional results, therefore, may indicate more about minor party strength than state legislative returns.

For these reasons, congressional races were felt to be the best choice for a sub-state election where local issues matter and where local party effort would be most directly affected by the kinds of socio-economic change at issue here. In this chapter, then, the focus will be on examining the consistency of the models for congressional campaigns both between sub-regions and as compared the results for gubernatorial and presidential analyses presented in Chapters III and IV.

It is expected that the patterns for congressional elections will be more similar to those for gubernatorial contests than to presidential results, and also that the major linkages which have repeatedly been found with
gubernatorial data will hold up for congressional data as well. If this is so, participation will continue to be a crucial intervening variable between the urban ones, and the non-linear model should continue to explain more variance than the linear one.

Analysis

The Outer South

The linear models diagrammed in Figure 12 show some support in some years for the prediction that the variables of urbanization and urbanism are related to competition via participation and that urbanism is also directly related to competition. However, this support is neither as clear nor as consistent as was the case with gubernatorial elections.

Prior to 1962, the patterns for the Outer South are dissimilar to linear results for that sub-region's gubernatorial contests. Urbanism is often omitted entirely, while urbanization sometimes has an indirect effect on IPC through participation and sometimes a direct one. Only in 1956 does a reasonable replication of predicted relationships appear.

A more familiar pattern appears in 1962 and after, except for the two most recent elections. The basic paths predicted in the test model appear, except for the omission of the industrialization-urbanism link, and the addition of
some extraneous paths on one or two occasions. The years 1974 and 1976 are a different story, however. In these years, only participation and urbanism are retained, but both relate directly to IPC; urbanism does not also pass through participation to influence IPC indirectly.

As was the case with gubernatorial elections, participation shows a consistent positive and substantial effect on party competition, usually but not always operating as an intervening variable between competition and the ecological indicators. As Table V shows, participation is the most important variable in terms of total effects in 12 of the 14 elections examined. It is followed by urbanization and then urbanism, a slight reversal of the ordering seen in Chapter IV. Again, industrialization is not important, except in 1956 and 1968, where its impact is minimal.

The explanatory power of the models is not very great, however, as Table VI shows. It reaches a high of approximately 30 percent only in 1958 and 1960, dropping off thereafter to about 16 percent in the last four elections. This is contrary to expectations: the model should explain more as time passes and ecological change proceeds.

The non-linear results shown in Figure 13 are somewhat clearer and more consistent from 1952 through 1968, and again in 1976. The patterns shown here are very like those found in gubernatorial elections. The impact of
1950

\[
\begin{align*}
U_1 & \rightarrow 0.51 \rightarrow P \\
1 & \downarrow \rightarrow U_2 \\
& \downarrow \rightarrow \text{IPC} \\
R &= 0.2092 \\
R^2 &= 0.0438
\end{align*}
\]

1952

\[
\begin{align*}
U_1 & \rightarrow -0.65 \rightarrow P \\
1 & \downarrow \rightarrow U_2 \\
& \downarrow \rightarrow \text{IPC} \\
R &= 0.2330 \\
R^2 &= 0.0543
\end{align*}
\]

1954

\[
\begin{align*}
U_1 & \rightarrow 0.15 \rightarrow P \\
1 & \downarrow \rightarrow U_2 \\
& \downarrow \rightarrow \text{IPC} \\
R &= 0.1637 \\
R^2 &= 0.0268
\end{align*}
\]

1956

\[
\begin{align*}
U_1 & \rightarrow -0.12 \rightarrow U_2 \\
1 & \downarrow \rightarrow \text{IPC} \\
& \downarrow \rightarrow P \\
& \downarrow \rightarrow \text{IPC} \\
R &= 0.4265 \\
R^2 &= 0.1819
\end{align*}
\]

1958

\[
\begin{align*}
U_1 & \rightarrow -0.13 \rightarrow U_2 \\
1 & \downarrow \rightarrow \text{IPC} \\
& \downarrow \rightarrow P \\
& \downarrow \rightarrow \text{IPC} \\
R &= 0.5702 \\
R^2 &= 0.3251
\end{align*}
\]

1960

\[
\begin{align*}
U_1 & \rightarrow 0.27 \rightarrow P \\
1 & \downarrow \rightarrow U_2 \\
& \downarrow \rightarrow \text{IPC} \\
R &= 0.5629 \\
R^2 &= 0.3169
\end{align*}
\]

1962

\[
\begin{align*}
U_1 & \rightarrow 0.16 \rightarrow U_2 \\
1 & \downarrow \rightarrow P \\
& \downarrow \rightarrow \text{IPC} \\
R &= 0.4699 \\
R^2 &= 0.2208
\end{align*}
\]
Figure 12—Path diagrams for congressional competition in the Outer South, 1950-1976, using the linear model.
1950
\[ U_1 \downarrow \quad U_2 \quad P \quad 39 \to IPC \]
\[ R = .4048 \]
\[ R^2 = .1639 \]

1952
\[ U_1 \downarrow \quad U_2 \quad P \quad .39 \to IPC \]
\[ R = .4222 \]
\[ R^2 = .1782 \]

1954
\[ U_1 \downarrow \quad U_2 \quad P \quad .37 \to IPC \]
\[ R = .3837 \]
\[ R^2 = .1472 \]

1956
\[ U_1 \downarrow \quad U_2 \quad P \quad .20 \to IPC \]
\[ R = .2884 \]
\[ R^2 = .0832 \]

1958
\[ U_1 \downarrow \quad U_2 \quad P \quad .57 \to IPC \]
\[ R = .5677 \]
\[ R^2 = .3223 \]

1960
\[ U_1 \downarrow \quad U_2 \quad P \quad .50 \to IPC \]
\[ R = .5013 \]
\[ R^2 = .2513 \]

1962
\[ U_1 \downarrow \quad U_2 \quad P \quad .43 \to IPC \]
\[ R = .4540 \]
\[ R^2 = .2061 \]
Figure 13—Continued

Fig. 13—Path diagrams for congressional competition in the Outer South, 1950-1976, using the non-linear model.
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*Again, the non-linear results for 1940-1974 were omitted because of unreliable results.*
urbanization is usually transmitted through participation and urbanism, especially in 1962 and after, and urbanism is often linked directly and positively with competition.

There seems to be little difference in explanatory power between the linear and non-linear results. Each explains more of the variance in precisely half the elections, but the difference in the percentage explained is, on the average, about the same, leaving no empirical reason for preferring one model to the other, at least in Outer South congressional elections.

The Deep South

Figure 14 shows some support for the test model in the years from 1954 to 1966 and again in 1970 and 1976; however, the path tying urbanism to participation is often left out and, as was the case with gubernatorial elections, is usually negative when it is retained. The path between urbanism and competition, on the other hand, is positive where it appears, which is consistent with prior analyses.

Participation, once again, is a crucial intervening variable from 1954 to 1970 and again in 1976. It is omitted entirely in 1972 and is linked only with competition in 1974. However, it still is the most important variable in more elections than any other variable, and is followed by urbanization and then urbanism, as was the case with the Outer South.
TABLE VI

COMPARISON OF LINEAR AND NON-LINEAR MODELS IN TERMS OF MULTIPLE R² FOR CONGRESSIONAL ELECTIONS

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*Underlined R²s are larger.

**Data for non-linear analyses for 1970-1974 are omitted because of unreliable results.
Industrialization here appears more often than in previous analyses, and its impact is quite strong in 1952 and 1962. In later elections, though it is retained in the model, its impact is minimal.

The multiple correlation coefficient after 1962 approaches 20-30 percent, reaching a high of 37.94 percent in 1964. It decreases to less than ten percent in the 1970-1974 elections, however, rising in 1976 to 28.99. In the pre-1962 years, the amount of variance explained is approximately ten percent or less. The R²s for the linear models, then, behave as expected: they increase in the later years when the effects of urbanization and industrialization have had time to affect the political variables.

In the non-linear models shown in Figure 15, a rather inconsistent pattern is shown prior to 1962. Participation is retained in the diagrams only twice in these years, though it is consistently retained in the remaining available elections.² Again 1962 seems to be a watershed year of some kind. In the post-1962 elections, a fairly consistent pattern is shown linking the urban variables to competition through participation. Interestingly,

²The diagrams for the non-linear analyses of 1970-1974 are omitted because the results included path coefficients of 31.29 and greater. This indicates either wildly skewed data or a problem in the packaged program used to do the log transformation. Since an examination of the raw data yielded no obvious explanation for these untoward results, no substantive interpretation was deemed appropriate, hence their omission.
**Figure 14—Continued**

1964

\[ U_1 \rightarrow .12 \rightarrow .83 \rightarrow U_2 \rightarrow .23 \rightarrow .25 \rightarrow IPC \]

\[ R = .6159 \]
\[ R^2 = .3794 \]

1966

\[ U_1 \rightarrow .15 \rightarrow .58 \rightarrow U_2 \rightarrow .11 \rightarrow .50 \rightarrow IPC \]

\[ R = .5036 \]
\[ R^2 = .2536 \]

1968

\[ U_1 \rightarrow .23 \rightarrow U_2 \rightarrow .54 \rightarrow IPC \]

\[ R = .5323 \]
\[ R^2 = .2834 \]

1970

\[ U_1 \rightarrow .55 \rightarrow U_2 \rightarrow .10 \rightarrow .15 \rightarrow IPC \]

\[ R = .1639 \]
\[ R^2 = .0269 \]

1972

\[ U_1 \rightarrow .53 \rightarrow U_2 \rightarrow .20 \rightarrow IPC \]

\[ R = .1991 \]
\[ R^2 = .0396 \]

1974

\[ U_1 \rightarrow .16 \rightarrow IPC \]

\[ R = .2474 \]
\[ R^2 = .0612 \]

1976

\[ U_1 \rightarrow .31 \rightarrow U_2 \rightarrow .18 \rightarrow .27 \rightarrow .13 \rightarrow .56 \rightarrow IPC \]

\[ R = .5384 \]
\[ R^2 = .2899 \]

**Fig. 14—Path diagrams for congressional competition in the Deep South, 1950-1976, using the linear model.**
industrialization is retained in all these later models, impacting on IPC indirectly through urbanism and participation exactly as specified in the test model. However, some additional paths are retained as well, notably the $U_l^{-}P$ link and a direct $I^{-}IPC$ connection in 1966. These results offer somewhat more support for the test model than either the linear Deep South models or both types of models for the Outer South.

Participation continues to show its strong intervening influence on competition. It is the most important variable in six of the 11 elections, followed by urbanism, then urbanization. This ordering, with respect to the urban variables, constitutes a reversal of the pattern for the Outer South, but a return to that shown for both sub-regions in gubernatorial elections. A clear difference in these models is the inclusion of industrialization and its occasional importance, in 1950-1954, 1960-1976 (excluding 1970-1974).

From 1962 onward, the non-linear model explains from 20 to 30 percent of the variance, as was the case for the non-linear models for the same years. In fact, the linear model is better two of three times, though the difference is not great. In the earlier years, the linear model was consistently better than the non-linear one, although, again, the differences were not that great.
Fig. 15—Path diagrams for congressional competition in the Deep South, 1950-1976, using the non-linear model.
Conclusion

Compared to gubernatorial and presidential results, the analyses presented in this chapter show additional support for some of the specified linkages in the original test model. However, as was the case in other kinds of elections, some paths originally expected to go to zero are retained in certain elections, and the predicted direct link between urbanism and competition is omitted about as often as it is kept.

For the non-linear analysis of the Deep South, moreover, the path between industrialization and urbanism is retained, implying that industrialization does affect urbanism, as the original model predicted. Unfortunately, the effect is often negative rather than positive, implying that percentage change in the number employed in manufacturing in a county is related inversely to the level of educational attainment for adults. Since this negative linkage is retained only for the Deep South, the explanation probably has to do with the kind of manufacturing prevalent in the sub-region. Textile mills, for instance, probably accommodate a less-educated work force than the petro-chemical or electronic instrument manufacturing more often found in the Outer South, and thus tend to locate where such a work force is available.

The consistently inverse relationship between urbanism and participation is difficult to explain. Although
urbanism is positively linked to competition, as expected, and so is participation, the $U_2-P$ path is almost always negative, as is usually the case when urbanization is linked directly with participation. Aggregate data such as these may be obscuring the forces at work here. In later years, when blacks could and did participate more, the sign might be explained by the fact that as a group blacks are generally less well-educated than whites, so in counties with large numbers of black voters, educational level would be inversely related to participation. This of course does not account for the inverse relationship in the earlier elections, when blacks were prevented from participating.

The explanation may lie in the changing composition of the southern electorate. One study, for instance, has shown that increased turnout is largely attributable to increased voting on the part of blacks and white women, who are generally less educated than white men, among whom the turnout rate has declined.\(^3\) Who is turning out or staying home across this time period may explain the consistent negative sign, but aggregate data cannot.

As in the case of gubernatorial elections, participation is the variable through which the effects of the

\(^3\)Carol Cassel, "Change in Electoral Participation in the South," *Journal of Politics*, XXXI (August, 1979), 917.
ecological variables are usually translated. In real world terms, urbanization and urbanism affect party competition mainly through their impact on participation. As might be expected, since it is closer to voting than the more aggregate environmental variables, participation is the most important explanatory variable for congressional elections, as it was for gubernatorial contests. Urbanism and urbanization come next; industrialization, except in Deep South congressional elections, is relatively unimportant.

Another finding in the congressional analyses is that 1962 seems to be a kind of watershed year, at least for the linear outer South models and the log models for the Deep South. This was consistently the case for gubernatorial results as well, and may indicate the entry of blacks into the active southern electorate after the civil rights struggles of the fifties, and especially the passage of the Voting Rights Act of 1965.

In the case of congressional elections, there seems little reason to prefer linear to non-linear models; the explanatory power is about the same. This may mean that the threshold has not yet been reached. That is, if the development of IPC is proceeding from the top down, then perhaps competition for congressional seats is still in the phase where a straight line equation is adequate and
has not yet reached the point where it begins increasing at a decreasing rate, when a non-linear equation would be more useful.

The results of congressional election analyses, in regard to their overall explanatory power, are better than results for presidential competition, but not as good as for gubernatorial elections. Models for congressional and gubernatorial levels of competition show more consistent support for the relationships predicted by the urbanization-competition hypothesis, both in the appearance of the predicted paths and in the explanation of variance, than did the results of analyzing presidential voting.

In sum, the expectations for the analyses presented in this chapter have been partially fulfilled: the models here are similar to gubernatorial models with the same linkages holding up both between sub-regions and, in a general sense, across time. Participation is a crucial intervening variable, as in the gubernatorial case. Two important differences were found, however: the inclusion of industrialization in most of the models for the Deep South and the lack of distinction between linear and non-linear approaches in regard to the explanation of variance.
CHAPTER VI

ECOLOGICAL CHANGE AND PARTY COMPETITION
IN RECENT SOUTHERN POLITICS

At the beginning of this research, diverse streams of literature were surveyed in order to draw out some generalizations about the ways in which certain kinds of socio-economic change affect changes in a political system. The specific changes of interest were those relating to urbanization and industrialization, the development of that way of life called urbanism, and the effects of these environmental changes on such political variables as voter participation and, ultimately, inter-party competition.

The test model suggested that the processes of urbanization and industrialization together create urbanism, which then affects party competition both indirectly by means of stimulating participation, and directly as well. These causal connections are diagrammed for reference in Figure 2, page 70.

To illuminate the processes at work, it was decided to focus on the American South of the last 30 years because it is in this region that the kinds of changes implicit in the test model have been observed, and thus
the region offered the best arena for examining that model. The method chosen was to compare cross-sectional path analyses over time, using three levels of electoral competition: presidential, gubernatorial and congressional. In addition, comparison was made between the Deep and Outer South sub-regions because these areas have experienced different kinds and rates of ecological change and have shown differences in their political patterns as well.

By taking this approach, this research hoped to answer the following set of questions regarding the urbanization-party competition hypothesis attributed to Key and Lockard:

(1) do the data support the relationships predicted in the test model?

(2) do industrialization and urbanization impact equally on urbanism?

(3) are the urban variables more important than the others?

(4) is participation a crucial intervening variable, i.e., is it the mechanism by which environmental change translates into political results?

(5) is the pattern of relationships consistent between sub-regions, and between kinds of elections over the time period involved?

(6) does the non-linear model implying a threshold effect explain more variance than a linear model?
The answers to these questions are not totally unambiguous; some findings are not consistent with original expectations. The chief of these is the inverse relationship between urbanism, indicated by the percentage of county population with at least a high school education, and participation, indicated by the percent of voters potentially eligible to vote who actually do. The negative relationship is one of the most consistent results found.

Since at the individual level, participation of all kinds increases with the level of formal education, the expectation of this result with aggregate data seems eminently reasonable. In the post-1964 years one might suspect that the sign could be attributed to the increased participation of blacks, who as a group are less educated than whites as a group. Thus counties with a low level of educational attainment might show greater levels of participation as a result of black mobilization. However, this does not explain the negative sign in the earlier elections, when blacks were prevented from voting.

Another unexpected result is the non-importance of industrialization, except in Deep South congressional campaigns. The percent change in the number employed in manufacturing, the industrial indicator, seldom passes the cut-off criterion for inclusion in the final path diagrams. Apparently, the industrialization of the South has had little
impact on its politics, at least as measured here. However, urbanization, the percent change in total population, does show the predicted positive direct effect on urbanism and, through urbanism and participation, to competition as well. In fact, as Figure 16 shows, these were the major confirmed linkages of the test model.

Figure 16 represents those linkages consistently confirmed by analyses of gubernatorial and congressional elections. In the case of presidential elections, the paths from $U_2$ to $P$ and from $P$ to $IPC$ were usually omitted. Participation was not an important variable in presidential elections. However, though urbanism was slightly more important than urbanization, in terms of total effects, for all elections, participation was the most important variable in the post-1962 gubernatorial and congressional analyses.
In the lower-level races, participation does have the status of a mediating variable between the environmental ones, except in those cases where urbanization directly affected competition. However, in most cases, the impact of environmental change, including industrialization where it was retained, was translated into party competitiveness through its effect on turnout, as the original model predicted.

Except for the omission of participation in presidential elections, these patterns were consistent between the sub-regions and for different kinds of elections after 1962. However, the results are not as clear and convincing prior to that date when the patterns shown by analyses are not consistent either with the test model or in the relationships they evidence. In 1962 and after, however, relatively clear support is shown for those paths linking urbanization and urbanism to competition through participation.

The overall explanatory power of the models, both linear and non-linear, varied quite widely from lows of ten percent or less to model values of 20 to 30 percent on the higher end of the scale. Apparently the model is quite good in explaining party competition in some elections, but quite weak in others.

Since these data are aggregated for concurrent elections in several different states, not all of which elect governors every two years, it may be that the impact
of short-term forces in a particular state outweighs the influence of environmental factors, causing the explanatory power of an environmental model to be less in some years than in others. That is, the variance in $R^2$s from year to year may be attributable to the events going on in the particular states which happen to be included in a specific analysis. The fact that, at least for governors and congressmen, a fair amount of variance is usually explained in the later elections gives us some confidence in this model's value.

With regard to the question of whether a non-linear model better approximates the shape of the data than a linear one, the answer seems to be in the affirmative for presidential and gubernatorial elections, but inconclusive for congressional.

The non-linear model implies that competition increases in a relatively straight-line fashion in the beginning, reaches a threshold of some kind, and thereafter increases at a decreasing rate of change. The meaning of this probably has to do with the fact that there are upper bounds to some of the variables, both mathematically and in a real world sense. Participation, for instance, is unlikely to reach 100 percent and, in fact, extremely high rates of turnout might very likely presage not party competition, but a one-sided rejection of some particularly undesirable candidate. So competition might increase fairly steadily
to a certain point, and thereafter increase more slowly. For gubernatorial elections particularly, the non-linear results are much better. They are slightly better for presidential elections, but show no difference with linear results for congressional races.

What may be concluded, then, about the Key-Lockard hypothesis which relates changes in the socio-economic environment to the development of party competition? With some qualifications, the model refined here seems to be an appropriate one for gubernatorial and congressional elections. Though urbanization is sometimes directly related to competition, its impact is usually transmitted through urbanism and participation to competition. However, it is urbanism, the development of the urban "way of life," which seems to be more important than sheer change in population size. This lends support to the idea that the urban environment is more conducive to competitive behavior than is the more traditional rural milieu. More important than environment, however, is the behavioral change associated with participation. The mobilization of larger groups of voters has an effect on competition outweighing that of background factors.

For presidential elections, the result is disappointing. The large amount of unexplained variance in most of the presidential analyses suggest that important explanatory variables have been left out. Very likely these omitted
variables would include the short-term forces of issues and personalities such as Eisenhower's "grandfatherly" appeal, Kennedy's Catholicism, the anti-McGovern bias, and so on.

There are other variables, less attitudinal in type, which might have also increased the explanatory power of the model considered here. As Gatlin suggests, local party effort matters more than socio-economic cleavage in explaining party competition. One might also consider the impact of in-migration from the North, which often has brought into the South persons of relatively high social status, businessmen and white collar technocrats. Such persons are frequently Republican identifiers, and have in some places contributed to the organizational revival of dormant local GOP groups.

However, the absence of appropriate data for party effort and in-migrant Republican activity over the time period under study precluded the use of such perhaps potentially fruitful variables. The aim of this study, after all, was to begin with a very simple model relating change in the ecology of a political system to change in certain political characteristics. Except for presidential elections, the model has shown itself to be relatively

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consistent over time. The predicted relationships, with the exception of industrialization, have in the main held up.

Perhaps the differences between presidential and the other elections should be taken as evidence that the ecology of a political system weighs heaviest on lower-level elections. If so, this should offer hope to those who envision a South of two-party politics. Support for GOP gubernatorial and congressional candidates seems likely to be positively influenced by the continuing development and spread of the urban culture, though truly competitive politics at every level may still be a long time coming.  

2 The electoral and census data used in this research were made available by the Inter-University Consortium for Political Research. The data were supplied in partially proofed form, and neither the original sources, the collectors nor the Consortium bear any responsibility for the analyses or interpretations presented here.
TABLE VII
PEARSON CORRELATIONS FOR POSSIBLE URBANISM INDICATORS WITH TOTAL POPULATION OF COUNTY IN 1950, 1960 AND 1970

<table>
<thead>
<tr>
<th>Possible Indicators</th>
<th>1950</th>
<th>1960</th>
<th>1970</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median Income</td>
<td>0.3148</td>
<td>0.3580</td>
<td>0.3824</td>
</tr>
<tr>
<td>Percent with high school</td>
<td>0.3369</td>
<td>0.3555</td>
<td>0.3556</td>
</tr>
<tr>
<td>Percent white collar</td>
<td>0.2743</td>
<td>0.4400</td>
<td>0.2216</td>
</tr>
</tbody>
</table>

Note: Although income shows a slightly higher correlation than education with total population in 1960 and 1970, the difference is not great. In addition, both measures were highly correlated with each other, at about 0.7 or 0.8. Education was more highly correlated with white collar than income, so it was chosen as the best overall single indicator of that complex concept called urbanism of which all these measures are a part.
### TABLE VIII

**STATES INCLUDED WHEN ANALYZING GUBERNATORIAL ELECTIONS IN DEEP AND OUTER SOUTH, 1950-1976**

<table>
<thead>
<tr>
<th>Year</th>
<th>Outer South</th>
<th>Deep South</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>Tenn., Tex., Ark.</td>
<td>Ala., Ga., Miss., S.C.</td>
</tr>
<tr>
<td>1952</td>
<td>Ark., Fla., N.C., Tenn., Tex.</td>
<td>La.</td>
</tr>
<tr>
<td>1954</td>
<td>Va., Ark., Tenn., Tex.</td>
<td>Ala., Ga., Miss., S.C.</td>
</tr>
<tr>
<td>1958</td>
<td>Va., Ark., Tenn., Tex.</td>
<td>Ala., Ga., Miss., S.C.</td>
</tr>
<tr>
<td>1962</td>
<td>Va., Ark., Tenn., Tex.</td>
<td>Ala., Ga., Miss., S.C.</td>
</tr>
<tr>
<td>1968</td>
<td>Ark., N.C., Tenn.</td>
<td>La.</td>
</tr>
<tr>
<td>1972</td>
<td>Ark., N.C., Tenn.</td>
<td>La.</td>
</tr>
<tr>
<td>1976</td>
<td>Ark., N.C.</td>
<td>La., Miss.</td>
</tr>
</tbody>
</table>

**Note:** The differences in numbers of cases reported for gubernatorial elections analyzed in Figures 8-11 is due to two factors: whether a state holds a gubernatorial election in a given year and whether a Republican opponent is on the ballot or not. Some states held elections every two years throughout this period and thus are included in more elections. Some states changed from two to four-year terms during the time and some, of course, had no Republican in the race during the earlier years. However, in all analyses, the N represents the counties of every state having a contested election in the sub-region during that year and smaller Ns do not represent missing data in the ordinary sense. Some of the variation in results is doubtless due to which states are included in the analysis; this is particularly true of those years in which only Louisiana held gubernatorial elections in the Deep South. Even so,
there does not appear to be much difference in the path diagrams themselves. The linkages retained or omitted are similar, as are the signs associated with path coefficients. The conclusion is that although these data are highly aggregated, the results are similar enough to be confident of them.
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