

The Diffusion of Democracy, 1946-1994

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Abstract

This article concerns the relationship between the temporal and spatial aspects of democratic diffusion in the world system since 1946. We show strong and consistent evidence of temporal clustering of democratic and autocratic trends as well as strong spatial association (or autocorrelation) of democratization. The analysis uses an exploratory data approach in a longitudinal framework to understand global and regional trends in changes in authority structures. Our work reveals discrete changes in regimes that run counter to the dominant aggregate trends of democratic waves or sequences, demonstrating how the ebb and flow of democracy varies among the world's regions. We conclude that further analysis of the process of regime change from autocracy to democracy, as well as reversals, should start from a "domain-specific" position that disaggregates the globe into its regional mosaics.

Key words: Democracy, political change, spatial diffusion, regional effects, Latin America, Africa, measures of democracy, space-time autocorrelation

Adam Michnik – a leader of Solidarity – observed during the June 1989 election campaign that the parliamentary elections in Poland would spell the end of the “Stalinist-totalitarian system” (Garton Ash 1990:11). Solidarity’s triumph in these elections, bringing the first non-communist government to Eastern Europe in over forty years, was soon followed by the first formal dissolution of a ruling East European communist party in Hungary. This “rip in the Iron Curtain” thereafter allowed a large number of East Germans to go to West Germany and once these events were set in motion, political developments in Bulgaria and Czechoslovakia quickly led to elections and new governments. Within two years of the 1989 Polish elections, the shortest but most dramatic period of democratization led to changes in regimes from the German Democratic Republic to Tajikistan. This democratic surge was part of a “Third Wave” of democratization that began about 15 years earlier in Southern Europe and spread to Latin America in the 1980s (Huntington, 1991). The global ripple effects of this regime change, accompanied by liberalization of national economies and economic globalization, have altered dramatically the nature of international politics, including relations between states and international institutions.

In this article, we examine the changes in the geographic distribution of political regimes since the end of World War II. We use a spatial diffusion framework for our study because it allows us to emphasize the inter-connections among temporal and spatial changes. Using an empirical measure of democracy derived from democratic and authority structures, we map and graph changes in the number and nature of political regimes to explore the spatial and temporal regularities and oddities of the process of democratic diffusion. Subsequently, we turn briefly to case studies of Southern Africa and Latin America to illustrate the democratic diffusion process and the relationships between the

external (foreign policy) context and the domestic political environment of the countries in these two regions. Based on our analyses, we speculate about the further diffusion of democratic norms and institutions and the possibility of a reversal of the recent trend.

In our study, we employ the methods of exploratory spatial data analysis (ESDA - Anselin and Getis 1992) to track time-space changes in the global topology of democracy, and calculate aggregate statistics of change to identify regularities in patterns over time. We do not seek to assess the cross-national relevance of any particular explanatory variable to democratization or conduct detailed historical examinations of the idiosyncratic national circumstances of individual states. Instead, we analyze aggregate trends with a view toward identifying regional concentrations as well as temporal and spatial effects within an endogenous framework. We use case studies of changes in Latin America and Africa to illustrate the rate and nature of democratization in the wider context of local and global. To our knowledge, there is no current overview of the long-term trends across the globe of the waves and reversals of political regime change. Partial studies by Huntington (1991) and Starr (1991) suggest a process of change that is regular, predictable and unstoppable. Our aim in this article is examine such changes in authority structures and regimes over time and space.

The Geo-Politics of Democratization

Since 1989, Western countries, especially the United States, have promoted the virtues of parliamentary democracy (*e.g.* Talbott 1996), the construction of civil societies, and the opening of national economies to a neo-liberal world order. Increasingly, western

organizations consider and often threaten to tie foreign aid to the establishment of competitive elections and removal of restrictions on civil liberties, as well as to the establishment of monetary and fiscal measures (Stokke 1995). Not all “democratic” developments have been devoid of problems. Old ethnic rivalries have resurfaced, authoritarian leaders have occasionally returned to office via the ballot box, drastic economic and social cleavages have persisted and new ones have emerged, and powerful elite and corporate interest have engaged the political process (Kaplan, 1997). However, the benefits of procedural democracy, of elections over power seizure, of division of powers between executive and legislature, and of protection of individuals against state power hold wide appeal. In the democratizing world of the late twentieth century, competing ideologies have been largely dismissed. In the perspective of contemporary world leaders, an increasingly democratic world appears to offer better prospects for peace, human rights, geo-political stability, greater trade, and economic development.

About 60 percent of the countries in the world-system now have democratic procedures, compared to about 28 percent in 1950 (of a total of 50 polities)¹. The “democratic peace” hypothesis holds that countries that are democratic do not fight each other because of the institutional and public opinion constraints placed on political leaders (Chan 1997). Human rights have been tied to democratic practices (Poe and Tate 1994; Arat 1991), and some commentators have even argued that the right to democracy is an emerging international norm (Franck 1992). Even skeptics find it hard to ignore the profound consequences of preeminence of democracy in a new era. At a global (macro) level, the struggle for political, economic and social rights since the end of the eighteenth-century can be viewed as part of a long-term process. In the aftermath of the

French revolution, Georg Wilhelm Friedrich Hegel surmised that changes in consciousness and shifts in ideology would be profoundly important. Fukuyama (1992) adopts this Hegelian logic to anticipate a world without significant political conflict as a result of the adoption of democratic norms. Democratization, in this view, is a product of attitudinal and cultural change. What is missing from the Fukuyama interpretation of the democratization wave is consideration of the processes of democratic transition and the struggle for political rights in contemporary societies. Braumoeller (1997), for example, uses survey analysis to probe the geopolitical questions emerging from “liberal nationalism” and associated democratic change in Soviet successor states. The linkage of domestic contexts and national geopolitics helps to clarify the effects of the new regimes on the post Cold War world and especially on regional conflict formations (Kolossoff and O’Loughlin 1998).

Procedural versus Substantive Conceptions of Democracy

From its Athenian origins, democratic theory has been associated with direct participation, political equality, and popular sovereignty. Although the city-state was by no means a perfect democracy by contemporary standards, it has served as a reference point for much of the later theoretical debate. The liberal tradition emphasized the constraints on state power and the development of civil society. Although not necessarily coincident with modern notions of democracy, the liberal tradition pushed support for political and civil rights and liberties, and (eventually) for the concept of institutionalizing representation as a means of ensuring a popular mandate.

Democracy has been written about widely since the end of the French Revolution. Most regimes in the world today claim to be democratic, in some sense of the word. Much social science also presumes to address questions that relate to the theory or practice of democracy around the world in various locales at various times. In such instances the meaning of the term may become so malleable that it is difficult to ascertain how widely differing conceptions and aspects of democracy may be reconciled. Indeed that may not be possible. We elaborate our own conceptions, recognizing that different approaches may yield different results.

One contending approach to democracy is to examine democracy in terms of desirable substantive outcomes such wealth, power, justice, equality, and inclusion. This approach includes a wide intellectual heritage of liberal as well as radical modern and post modern theory, ranging from Aristotle, through de Tocqueville, to Bobbio (1989). Using a substantive approach focuses attention on the extent to which one can observe these and other putatively desirable outcomes as manifestations of the scope, breadth, and quality of society.

In the literature on democratization, there are numerous studies that detail the struggles for the extension of political power (Rueschemeyer *et al.*, 1992). Geographers have tackled questions that directly confront the meaning of “democracy” by examining the experiences of excluded groups and their attempts to extend democratic principles to economic and non-formal political arenas (Marston and Staeheli, 1994; Agnew, 1995; Staeheli and Cope, 1995; Kofman, 1995; Painter and Philo, 1995; and Brown, 1997). Geographers have been strongly influenced by theorists of “radical democracy” who wish to expand the definition of democracy to include principles of economic equality and

social opportunity (Gould, 1988; Bobbio, 1989; Held, 1991; Cohen and Arato, 1992; Mouffe, 1992; Benhabib, 1996)

Taken to its extreme, defining democracy in terms of its outcomes becomes somewhat tautological, and risks losing analytical leverage. For example, if we define democracy in terms of the provision of adequate health care, it becomes difficult to learn about democracy independently of learning about health care systems. Thus, many substantively based studies of democracy may also be viewed as studies of civil society (Cohen and Arato 1992). Occasionally, the extent to which scholarship on civil societies (Almond and Verba 1989; Putnam 1993) informs democratic theory may be mistaken for investigations of the institutional mechanisms of democracy as a system of decision-making.

For some purposes, it is useful to separate substantive and procedural definitions of democracy, in order to assess the performance, prerequisites, and the promise of democratic rule. Obviously, one's definition or meaning associated with the term democracy will affect the evaluation of the extent to which democracy exists in the contemporary world. Our approach is to focus on the institutional bases of democracy, though we recognize that this avoids questions of substantive democracy, of inclusion, and participation in a broader sense beyond the "narrow" realm of politics.

We employ a procedurally based definition of political democracy, since we are primarily interested in changes in institutional structures in contemporary and historical societies and do not seek to directly assess its affect on particular substantive outcomes in this research. We also believe that a separate assessment of political and economic

democracy is more meaningful if each component is treated as analytically, if not empirically, distinct.

Generally speaking, democracy is widely meant to refer to systems that encourage inclusion, participation, open competition, and institutionalized constraints. Empirical studies of political democracy and democratization in this procedural tradition have revolved around: a) political competition, or the extent to which structures and institutions of the state permit open competition for political power and protect the basic political rights afforded the individual; b) participation, or the extent of meaningful inclusion of individuals and diverse groups within the system; and c) the issue of liberties and the rule of law, or the extent to which certain political and civil rights of individuals are guaranteed within the system. The relative importance accorded each component differs among studies, and in some cases, the influence of one characteristic is subsumed within the realm of another.

The theoretical emphasis on competition, participation, and liberties is reflected in many contemporary studies of democracy. Our interest is in generating a big picture of the broad outlines of institutional democracy around the world, and binoculars seem more appropriate than microscopes. We focus, therefore, on four basic, comparative dimensions of institutional democracy that apply to contemporary and historical polities (countries) to provide a rough assessment of political democracy. These are:

a) constraints on the executive decision-makers of a polity; b) the extent of competition among political forces; c) the regulation of political participation; and d) the openness of recruitment into the decision making bodies. These are derived from a broader theory of

authority relations initially developed to examine authority patterns of any social unit, including national political systems (Eckstein and Gurr, 1975).

In particular, five explicit measures of these components are employed. We gauge the competitiveness of political participation ranging from societies with suppressed participation to those that exhibit a highly competitive national political process. The regulation of political participation ranges from societies with strong restrictions on who can participate and the extent of their participation to societies with regular and institutionalized forms of popular participation, such as elections. We are also interested whether chief executives are chosen by selection or election. If the process of executive recruitment is open, procedural democracy is enhanced, and we gauge this as well. Finally, we assess whether there are institutional constraints on the power of the chief executives from alternative political institutions such as independent legislatures; more constraints are seen as enhancing procedural democracy. We create a summary measure of democracy (which is explicitly defined in Appendix I) that reflects each of these components. This measure is widely employed in comparative studies of procedural democracy in political science and is discussed in Jagers and Gurr (1995 and Gleditsch and Ward (1997). These data evolved from what was originally a study of political system persistence and change (Gurr 1974). These data are available in the Polity III database.²

Our democratic measures do not tap the radical democracy notions of justice and development. More pertinent for our approach, they do not directly assess the level of inclusion or extent of political participation. Neither, do they directly gauge the provision of political or civil liberties. However, the institutionalized democracy and autocracy

scales have been found to correlate highly with other specific measures of inclusion, liberties, and freedoms (Jagers and Gurr 1995). Since the institutional measures are more broadly comparable and widely available for a large sample of countries over a long period of time, they act, for us, as a useful surrogate for participation and political and civil liberties. In this study, we use the difference between the institutionalized democracy and autocracy scales as a general index of level of democracy.

The Polity III data set is an attractive alternative to other data sets in the examination of global democratization trends for a number of reasons. While many alternative data sources employ dichotomous measures of democracy and autocracies, using a continuum of twenty-one possible scores for a given state ranging from -10 to +10 avoids the pitfall of having to impose arbitrary threshold values for democratic versus non-democratic status. Unlike many alternative dichotomous indicators of democracy and autocracy, the democracy scale allows us to consider degrees of democracy and autocracy, as well as observe relatively small discrete regime changes. Second, its measures are synthetic rather than reductionist, allowing a continuum that distinguishes dimensions of democracy and autocracy.

Third, the data are consistent with numerous other measures of regime type, political liberties, and of human rights practices (Gleditsch and Ward 1997; Jagers and Gurr 1995). Several alternative typologies of regime types have been developed. Alvarez *et al.* (1996) distinguish between limited and despotic, and autonomous and heterogamous regimes, as well as varying degrees of contestation. Gastil (1990) highlights two components of a democratic system; political rights or political structures, and civic rights or civil liberties. The extent to which these are identified and protected

within a state suggests the extent of democratic practices. Others have cited the relative power of elite and non-elite (Bollen 1980), the presence of free and fair elections (Downs 1957), the extent of participation in terms of voter turnout (Lerner 1958; Vanhanen 1979), and political accountability as key indicators of level of democracy. Tatu Vanhanen (1984), in his study of the emergence of democracy, has tried to operationalize Dahl's (1979,1989) two dimensions of democracy and measure these empirically as joint indicators of political democracy. The high inter-correlation among the Polity III measures and other specific indicators of democratic character (Jagers and Gurr 1995:475) gives us confidence that the patterns and trends identified in the course of our study are generally representative of democratic developments

Fourth, Polity III is rapidly becoming the standard data set of choice in studies of democracy and associated phenomena. A representative list of studies using these indicators may be found in (Jagers and Gurr 1995:470). The Polity III data set provides information for all polities and has a low threshold (500,000 inhabitants) for the inclusion of a country in the international system.

Beyond these justifications, the most compelling motivation for the use of the Polity III data for our research is that the measures are intended to have broad comparability across space and time. Scores with contextual nuances that privilege local circumstances in each country would actually impede comparisons with the experiences of other countries.

The Growth and Spread of Democracy

A shift in the tone of the research on democratization occurred between the 1950s and 1980s (Shin 1994). While the earlier period was characterized by searches for the “conditions and prerequisites” of democracy, research in the past decade has emphasized the dynamics of the democratic transition and consolidation. For the examination of the large literature on democratic structures, a useful classification is based on geographic scale. Global or *macro-level* perspectives examine democratization as part of a large-scale process eventually reaching all peoples in all states. The process may be related either to an independent causal factor or could be self-generating. *Meso-level* or regional perspectives such as that of Deegan (1994) hold that, since the globe is a mosaic of different regions and states, some regional contexts are more amenable to political change than others. An identification of the factors by region will facilitate an understanding of why some contexts are mostly democratic (Europe) while other contexts are not (Middle East). *Micro-level* or state-oriented views such as that of McDonough *et al.* (1986) examine the conditions promoting democracy cross-nationally. By correlating independent economic and social characteristics with broad indicators of democracy, a general cross-sectional model is expected to predict where future democratizing trends are likely to be seen.

A Eurocentric perspective views the spread of democracy as the political outcome of the spread of capitalism from its European core in the centuries after 1500, associated with the Enlightenment and the spread of European traditions through colonialism.³ The succession of world leaders (the Netherlands in the 17th century, the United Kingdom in

the 18th and 19th centuries, and the United States in the 20th century) have each promoted a respective global ideology (Modelski and Perry 1991; Taylor 1996). The U.S. has been especially forceful in the post-1945 period as the promoter of liberal democracy (Robinson, 1996). The economic-political relationship is reciprocal. Capitalist states typically laud democracy as a superior form of political organization. The stable, bipolar system of the Cold War collapsed in 1989 and with it fell the only concerted long-term opposition, that of communism, to a world-system of democratic states.

At a regional or meso-level, certain types of regionally-clustered states are more susceptible to democratization than other regions due both to internal conditions and to “snowballing” or contagion effects from neighbors. The internal conditions in neighboring countries are typically similar and thus provide similar impetus toward regime transition along the lines argued in the so-called “social requisites of democracy” school emanating from the work of Lipset (1959, 1994) and others. The essential indicator, a growing GDP/capita, reflects a widening of the middle class, an increase in educational levels, urbanization and an economy that is industrializing and diversifying. In a global economic downturn, developing countries become especially attractive as sites for capital investment as a strategy to reduce costs and maintain profits in an increasingly competitive world-economy. Foreign investment in semi-peripheral states, leading to deeper incorporation into the world-economy, can undermine authoritarian regimes by creating a mercantilist class that demands greater political voice.

According to Bergesen (1992), semi-peripheral states are more constrained than core states in their responses to global recession. With state legitimacy already low, the strains of economic recession can topple governments. Political changes to accommodate

some opposition, as well as to show a more democratic face to the outside world, offer a way to reduce internal unrest. However, some scholars hold that this type of external intervention serves only to promote nominal “low-intensity democracies,” or minor political change without modifications to the underlying political and social structures. The result, according to this view, is a state sympathetic to foreign interests and susceptible to external markets (Gill *et al.* 1993). Bergesen (1992) and Boswell and Peters (1989) attribute the temporally-coincident and geographically-concentrated wave of democratization in Latin America and East Asia in the 1980s and in Eastern Europe after 1989 to the mobilization of internal opposition. Because of the regional clustering of states of similar economic, social and political character, the same external influences have region-wide impacts.

Advocates of the world-systems and economic perspectives on political change, however, do not usually consider another regional factor. Neighboring states are typically oriented to the same political-economic policies; in the language of spatial analysis, they share a regional positive diffusion effect or a regional learning curve (Shin 1994:152-53). Starr (1991) as well as Modelski and Perry (1991) detected demonstration effects in analyses of regime changes towards democratization over time; however, neither study directly considered possible internal factors nor examined the regional heterogeneity of the world-system. Starr (1991) found some evidence of regional effects but his simple counting of transitions across eight world regions does not allow confidence in the results. Instead, Starr (1991:371) concludes “although we might posit emulation via awareness of events throughout the global system, those same diffusion effects were taking place at a regional level for *some* of the world system” (his emphasis).

At a local or micro-level, we can divide the analysis of the factors promoting democratic transition into external and internal sets. Though there have been many studies of war diffusion looking at external influences (Starr and Most 1976; Siverson and Starr 1990 and 1991; Kirby and Ward 1987; O'Loughlin and Anselin 1991), to our knowledge, only Starr's (1991) study has explicitly examined the spatial diffusion of democracy.⁴ The impact of external effects on transitions has been frequently hypothesized, but despite evident empirical examples of internal-external linkages in Eastern Europe in 1989 (Garton Ash 1990), no comprehensive examination of these linkages has yet been finished.

Many studies of democratization are devoted to comparing the internal conditions of states with their level of democracy. The central relationship between state attributes and level of democracy examined by researchers is the hypothesis that economic growth moves authoritarian regimes towards democratic values. Schumpeter (1950) saw the "natural affinity" between capitalism and democracy and did not think it coincidental that together these systems emerged from feudal society. While he believed that socialism could be compatible with democracy, he accepted that "Whatever democracy there was ... developed historically in the wake of both modern and ancient capitalism" (Schumpeter 1950:129). In this view, freedom of individual choice is the underlying rationale of both democracy and capitalism (Coe and Wilber 1985).

Beginning with Lipset (1959), and reinterpreted and extended in Lipset (1994) and Lipset *et al.* (1993), the "social requisites of democracy" school has dominated the study of democratization. Vanhanen (1984, 1990, 1992, and 1997) estimates that dozens of statistical studies of the relationship between democracy and domestic social and

economic factors have managed consistently to “explain” 60 to 70 percent of the variance in the democracy score. Controlling for many other factors—Huntington (1991) lists 27 factors that are statistically related to democracy—the independent effect of a rising GDP/capita has been consistently supported. The central argument of the “social requisites” school is that social and economic conditions in a state constrain the opportunities for establishing and maintaining democratic institutions. However, these conditions are not fully determinative, leaving room for choices and for political alternatives (Vanhanen 1992). Social and economic conditions, in turn, can be changed by political decisions, so that some indecision remains about the causal direction, whether rising wealth is a cause or an artifact of political changes.

Lipset *et al.* (1993:158), citing supportive studies (Cutright 1963; Bollen 1979, 1980 and 1983; and Bollen and Jackman 1985), statistically test various non-linear relationships between wealth and democracy to show that an N-shaped curve offers a very good fit. They also show that indirect effects may be present in addition to the influence of increasing GDP per capita. They emphasize that economic development alone will not always lead to democracy since national experiences and structures also matter. Other studies of the effects of rising personal wealth on democratic scores have found a U-shaped pattern for a study of 132 Third World states (Hadenius 1992). Further, colonial traditions (Lipset 1994) and religion in the form of Protestant, Catholic and Islamic traditions (Bollen 1979; Huntington 1991; Lipset 1994) show significant statistical relationships with the level of democracy, after controlling for GDP/capita. Results have generally been consistent, and the basic Lipset model has been supported using more advanced statistical methods (Burkhart and Lewis-Beck 1994).

Despite general statistical support for the economic-democratization hypothesis, the process by which rising wealth is converted to a higher level of procedural democracy remains a matter of some dispute. All studies begin with the process of industrialization from traditional societies in which wealth is heavily concentrated in the hands of a landed elite. As the society industrializes, a growing bourgeoisie and urban proletariat emerges. This, in turn, causes the power of the landed aristocracy to wane (Tilly 1978, 1984). The relative distribution of economic, intellectual and other power resources among various sections of the population is a fundamental factor accounting for the variation of democratization. No group is able to continue to suppress its competitors and maintain its hegemony so that democracy is a rational compromise between roughly equivalent competing groups (Vanhanen 1992).

While the notion of the decentralization of economic and political power over the centuries is widely agreed, the nature of the main actors in the democratic transition is much disputed. Barrington Moore (1966) argued that the primary interest of the bourgeois class lies in the guarantee of the infrastructure of continued capitalist development and accumulation as this class opposes the proletariat and the traditional aristocracy. The bourgeoisie, therefore, wants a democratic state that supports institutions that are universalistic and liberal. Increasing personal wealth generates a more educated, politically astute middle-class that will demand redress of an impotent political position and will work to promote a democratic state. O'Donnell *et al.* (1986) and Przeworski (1990) offer more empirical evidence from Latin American and the former Eastern Europe for the notion of the urban bourgeoisie as a key actor in democratic transitions. Other social scientists have nominated other social groups, usually urban-based, as

instrumental in generating political change from authoritarian to democratic government forms. Rueschemeyer *et al.* (1992) contend that the bourgeoisie favored democracy only in certain cases. According to their comparative historical studies, the working class in many cases played an instrumental role in bringing about political democracy. Competing class interests can promote or resist democratization; the structure, strength and autonomy of the state apparatus and its relations with civil society, as well as the impact of transnational power, ultimately dictate whether and how democratic transitions occur.

This review has shown how the various approaches have produced separate inferences about the genesis of democratization. While most attention has focused on the methodological divide between the historical and statistical approaches, our review has argued that the failure to integrate various levels of analysis (state, regional or global) has also generated an unnecessary splintering of the democratization literature. Recognition of external effect is growing; “a diffusion, contagion, or demonstration effect seems operative, as many have noted, one that encourages democracies to press for change and authoritarian rulers to give in” (Lipset 1994:16). Like Rokkan (1975, cited in Tilly 1984:132), writing about nation-building in Europe, we believe that most case studies of democratization are “too atomizing...(treating) each case in isolation without taking account of its connections with its surroundings, of the geopolitical position of the area in question. I began to study the links in *space* among the different cases and became convinced of the decisive importance of *interregional relationships*” (his emphasis). Our work explores the separate and overlapping effects of the global, regional, and neighboring trends over the past half-century towards democracy in a spatial diffusion framework.

Diffusion and Democratization

As described by Brown (1981), an unnecessary cleavage in the diffusion literature has developed between innovation *in-situ* developments on the one hand (emphasis on local and regional contexts) and diffusion processes (emphasis on external effects) on the other. As a diffusion process, democratization can be examined by focusing on the internal characteristics of a country including the growth of inclusive political and civil rights, as well as institutions that support these social elements. Such a perspective might explain how democracy spreads across localities *within* a particular country. This local study would not, however, explain why democracy spreads between countries unless there were some global forces and structures, generating similar pressures in different locales, as in a hierarchical diffusion. The institutions and norms that comprise democracy, the states and societies that are susceptible to change, and the socio-political landscapes of countries across the globe, modified at a variety of scales by internal and external actors, are the objects of measurement and evaluation. As noted above, traditional study of democratization typically isolates an individual factor or limits itself to an individual country. “Galton’s problem” (whether observations with similar structural similarities may be dependent among geographic units as a result of common external influences upon the units, rather than reflecting underlying internal structural characteristics – Galton, 1889) remains an unanswered issue in the study of democratization.

Approached as a diffusion process, democratic change can be viewed in terms of two important elements: namely, the transfer of information and its reception. An analysis

of the transfer processes involves a consideration of communication channels, external promoters of democracy, internal facilitators, as well as the barriers to its spread.

Democratization can be viewed as a possible outcome of the ebb and flow of information at domestic, regional, and global scales. These information flows are part of a web of interactions related to geographic proximity, trade, diplomacy, and contingent historical circumstances (Pollins 1989). Linguistic, cultural, psychological, religious, and ideological differences often serve as barriers to these information flows, leading to a differentiated political mosaic across the globe. The quality and cost of particular communication channels, as well as the activities of promoters and opponents, affect the extent to which political information is shared and ultimately influences whether democracy is implemented.

The characteristics of receivers determine whether institutional and normative changes are eventually implemented. As with other social phenomena, the potential receiver must choose between adopting or rejecting the innovation (Rogers 1995). With large-scale political change, there is a significant difference with other diffusions because the decision to adopt or not is often made at an institutional level (head of state or legislative body) and it is thus not an aggregate outcome of individual decisions. The process of democratization is intimately tied to the emergence and success of social movements (Markoff, 1996). The study of collective action focuses on the relevance of communication behavior and opportunity structures for mobilization, and examines the importance of domestic characteristics such as socioeconomic conditions, regime stability and coherence, and political opportunity or repression. Additionally, adoption of

democratic change is often a function of the elite's perceptions of the relative benefits, compatibility, complexity and suitability of democracy in the local context.

The decision to initiate or resist democratic change thus hinges on a combination of conditions in the receiving state, local perceptions of democracy as an alternative to the existing political system, and the outcomes of the struggles by competing groups for their preferred political regime styles. Less specific attention has been devoted to the role of barriers to adoption, an important element in the geographic approach to innovation diffusion. Distance is an important restraint on communication between adopters, promoters and information receivers, and diffusion processes can be channeled more quickly in some directions than others because of cultural, language, social or religious barriers (Gould 1969). Starr (1991) has called for the careful investigation of these barriers in the study of democratization.

Many of the international instances of democratization are coerced, promoted, or instituted by outside forces. One historical examination of 61 independent states identified only three states that generated democracy through independent invention: Sweden, Switzerland, and the United Kingdom (Whitehead 1996). The remaining fifty-eight countries experienced varying degrees of external influence. Through incentives offered, sanctions threatened, or use of force, a promoter can induce democratization. In this century, international organizations, private foundations, corporations, and individual governments have all taken active roles in the promotion of democracy. The pattern of diffusion in this instance is more predictable and is based predominantly on the interests of the promoting. In recent decades, the United States has been an active promoter of transitions towards democracy (McDougall 1997). For example, the democratic wave of

approximately 20 countries in 1989 was widely perceived as a mark of success of the “Pax Americana” (Agnew 1993; O’Loughlin and van der Wusten 1993).

Studies of diffusion typically find the temporal pattern of adoptions to an innovation resemble an S-shape curve, with few adopters in the earlier periods, a rapid increase in adoptions in the middle years, and slow acceptance of the innovation by laggards (Gould 1969; Morrill, Gaile and Thrall 1988). By the early 1990s, more than half of the world’s countries exhibited democratic characteristics; a diffusion model suggests that further democratization should increase more gradually as saturation is approached. The S-curve is most appropriate for relatively stable populations. It does not adequately address situations with recognizable waves of innovation and reversals, as is the case of the diffusion of democracy. Once you have small pox, you are no longer susceptible. The same is not true of democracy. In this case, the spatial context is constantly expanding since the natural limits of the bounded logistic curve keep moving upward as more polities are created.

The applicability of the classic diffusion model is limited for our purposes since we are concerned with aggregate adoption by countries rather than the changing opinions of individual citizens. Most diffusion studies (including those by geographers) focus on individuals and their adoption rate, such as farmers in Sweden (Hagerstrand 1967) or of the spread of disease (Cliff and Haggett 1988). Important elements such as the nature of the diffusion mechanism (hierarchical, contagious or relocation), the slope of the S-curve of adoption, the role of information providers, relative access to information, and the constraints imposed by opposition forces correspond quite poorly to our emphasis on adoption of authority structures in polities. A disjuncture between centographic methods

of analysis used by geographers for the study of individual adopters and spatial-statistical methods appropriate for the study of aggregate adoption is therefore apparent.

Five prototypes of diffusion can be identified in the work on democratization (Huntington 1991; Modelski and Perry 1991; Starr 1991): i) *adaptive innovation* - as countries see the benefits of democratization for earlier adopters; ii) *emulation* - where the uncertainties of democratization are lessened by the examples provided by other states; iii) *promotion* - as a country is coerced or convinced to follow the example of a powerful or revered prototype; iv) *expansive communication* — in which polities learn about the elements of democracy; and v) *local context* — in which the internal readiness of a state for acceptance of external stimuli is related to its domestic conditions. Each of these forms has distinctive dynamic properties. Adaptive innovation can inhibit democracy if the previous democratic experience of a neighbor or similar state has been a failure. Emulation typically operates in a hierarchical pattern based on the power hierarchy in a region. The promoter of democracy is typically driven by self-interest rather than by a consideration of the internal conditions in the adopting state. The expansive communication model is limited by the fact that since over 56 percent of all existing polities are now democratic, it is not likely that non-adopters are unaware of the existence of the idea of democracy, but more probable that they have not adopted due to local circumstances. The adoption or non-adoption of new forms of government is dependent on the nature of complex local conditions. The ability to distinguish between different forms of diffusion is important for further understanding of the spread of democracy. Isolating individual, local factors is problematic because both internal and

external factors, as well as the regional setting of the country, clearly deserve consideration.

Geographic Measures in a Changing International System

The international system has grown and expanded markedly since the early nineteenth-century, with the number of polities increasing from 31 in 1815, to 56 in 1900, to 157 in 1994, and 158 by the beginning of 1998. Given the political dependence of extensive geographic areas prior to decolonialization and the extensive territorial rearrangements caused by World War II, we limit our study to the post 1945 era. The changing boundaries of existing states and the arrival of new states into the international system create opportunities and problems for spatially-based, cross-national statistics. In-situ developments in member states of the international system generate no conceptual spatial difficulty, since the topology does not change except in the case of dramatic boundary shifts. Only the political values assigned to each country change. However, new states entering the international system with associated changes of international borders present more of a challenge. Spatial statistical analysis typically assumes that the topology remains constant. While this constant topology is usually the case (for example, in studies of American counties or states where the borders of the geographic units remain constant throughout the study and the number of cases is the same at the end as the beginning of the study period), this condition is obviously not met for international borders over any reasonable time span.

The modern era (1815—present) has witnessed both the rearrangement (*e.g.*, Germany in 1918) and disappearance (*e.g.*, Prussia in 1870) of established polities, as well as the emergence of many new states (*e.g.*, the process of decolonization of Africa after 1957 and the independence of 15 former Soviet republics in 1991). Since the implementation of diffusion models assumes a fixed underlying geography, such models will not be applied easily to big changes over long periods of time, but will be more appropriate in situations in which either the timeframe or the spatial context is relatively tightly constrained (or both). To make this issue more specific, consider the calculation of the spatial correlation using the widely employed measure of spatial association, G_i^* .⁵ A dynamic map of changing political terrain in the world makes temporal comparison of spatial-statistical measures virtually impossible because the size of the contiguity matrix, on which the index is based, changes from year to year. In our study, the spatial units (polities) become more numerous over time. Thus, if country B, a neighbor of A, enters the world-system at a later date, the G_i^* value for A is therefore altered by this additional neighbor and the G_i^* values cannot be compared across time since they are normalized differently at each point in time.⁶ The issue is similar to the “modifiable areal unit problem” well-known in geography (Fotheringham and Wong, 1991; Fotheringham, 1997) but is magnified by the relative stability and salience of national borders. One approach to the challenges posed by the dynamic world political map would be to treat each year as statistically independent. This option would be suitable for studying spatial autocorrelation but ignores the temporal aspect of diffusion and completely misses the space-time interactions. Both spatial and temporal aspects of diffusion must be acknowledged and analyzed both separately and together.

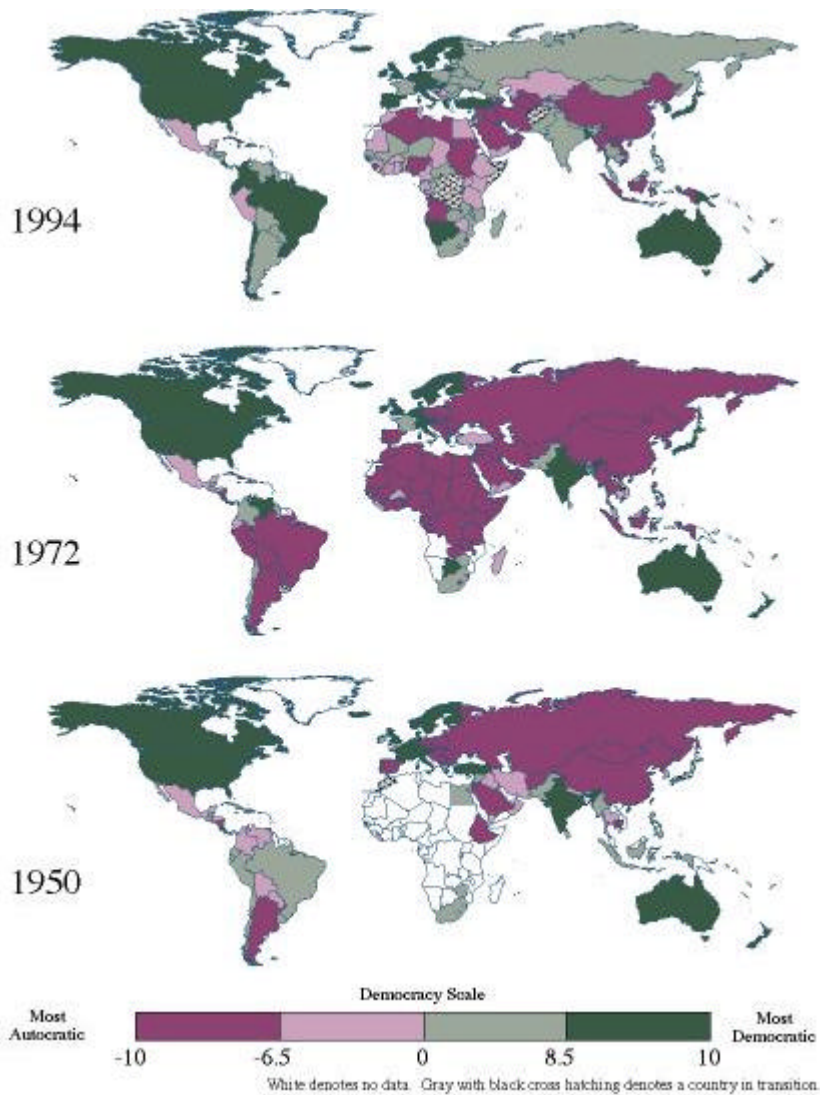
In order to compute the spatial measures, Moran's I^7 and G_i^* , we needed to choose a spatial weight metric. Unlike many geographic studies that typically use a distance metric, such as the inverse of the squared inter-centroid distance, we chose the contiguity metric because of the specific nature of the study. In earlier studies of diffusion in international politics, comparison of different metrics has indicated the superiority of the land border (or short sea distance) as the preferred metric (Most and Starr 1976; O'Loughlin 1986; Kirby and Ward 1987; Gochman 1991; Starr and Siverson 1991).

Our method of deriving weights used an Arc/Info[®] macro program to generate a contiguity matrix from each of the Arc/Info coverages of the changing world map. Generating the contiguity matrices for every year (1946-1994) requires several separate steps. True physical contiguities are first generated for the six Arc/Info coverages, 1946-1954, 1955-1974, 1975-1989, 1990, 1991-92 and 1993-94 that are required to take boundary changes into account. A new coverage is required when a new border is added to the international system, such as the effacement of the international border between North and South Vietnam in 1975. After the coverages were created, they were checked for a range of errors including non-matching of polygons and polities, so that (*e.g.*) the Brazilian polygon actually receives Brazil's data and neighbors. Other checks included identification of countries and territories that are not part of the Polity III data set (*e.g.* Greenland) and a check of reflexivity of contiguities (*e.g.* France is a neighbor of Germany and vice-versa). Islands and countries with no proximate neighbors were also checked and some were connected based on physical proximity.⁸ After the construction of the six meta-matrices containing all possible connections between the countries, the

matrices were then reconstituted as yearly contiguity matrices by determining which polities are in the system in an individual year and then configuring the meta-matrix to correspond to that configuration. Polities can therefore become temporary political-geographic islands as their neighbors fall out of the international system or if they are coded as “in transition” in the Polity III data ⁹.

The Changing Distribution of Democracy.

The three maps in Figure 1 summarize the changing distribution of democracy since 1946.¹⁰ The dominant features of the maps are the growth of the world-system shown by the reduction of colonies (empty cells) over time, especially in the 1960s; the growth in the number of strongly democratic states (scores greater than 8) over time; and the relative frequency of “reverse waves” towards autocracy (examples include India between 1972 and 1994, Egypt between 1950 and 1972, Turkey between 1950 and 1972, Venezuela between 1972 and 1994, Indonesia between 1950 and 1972, and Brazil between 1950 and 1972). Other notable features on the maps include the strong, though imperfect, correlation between wealth and strong democratic status and, as a corollary, the concentration of stable democracies in North America, Western Europe, and Australasia/Japan. The most dramatic changes have occurred in Latin America (partly democratic in 1950, to autocratic in 1972, to mostly democratic in 1994), former Eastern Europe/Soviet Union (partly democratic in 1994), and sub-Saharan Africa (from colonial status to autocracy in 1972 to a mixed democratic-autocratic set of polities in 1994). Though the maps confirm the general impression of the growth of democracy, many important reversals



demonstrate that the process of democratization is not uniformly one of growth and geographic spread.

The geographic patterns in Figure 1 and in other sample years can be summarized by the well-known measure of geographic clustering, Moran's I. The number of polities, mean democracy score, and the Moran's I value for selected years from 1946 to 1994 are shown in Table 1. The average democracy score fell after 1946 to a low of -2.403 in 1977 and increased again to the maximum of 2.98 in 1994. The temporal trends are consistent, with the only significant break points in 1990-91. The independence of many states in

Table 1: Distribution of Moran's I scores for selected years between 1946 and 1994*.

<i>Year</i>	<i>N</i>	<i>Mean democracy</i>	<i>Moran's I</i>
1946	76	1.111	0.320
1947	77	0.844	0.348
1948	81	0.378	0.413
1949	86	0.089	0.465
1950	87	0.195	0.443
1955	92	0.118	0.397
1960	109	-0.245	0.437
1965	128	-1.041	0.308
1970	135	-1.504	0.397
1975	141	-2.044	0.382
1977	142	-2.403	0.414
1980	142	-1.724	0.428
1985	142	-1.156	0.480
1986	142	-0.941	0.464
1987	142	-0.971	0.460
1988	142	-0.775	0.450
1989	142	-0.496	0.499
1990	141	0.887	0.559
1991	155	2.181	0.538
1992	156	2.301	0.473
1993	157	2.711	0.376
1994	157	2.980	0.369

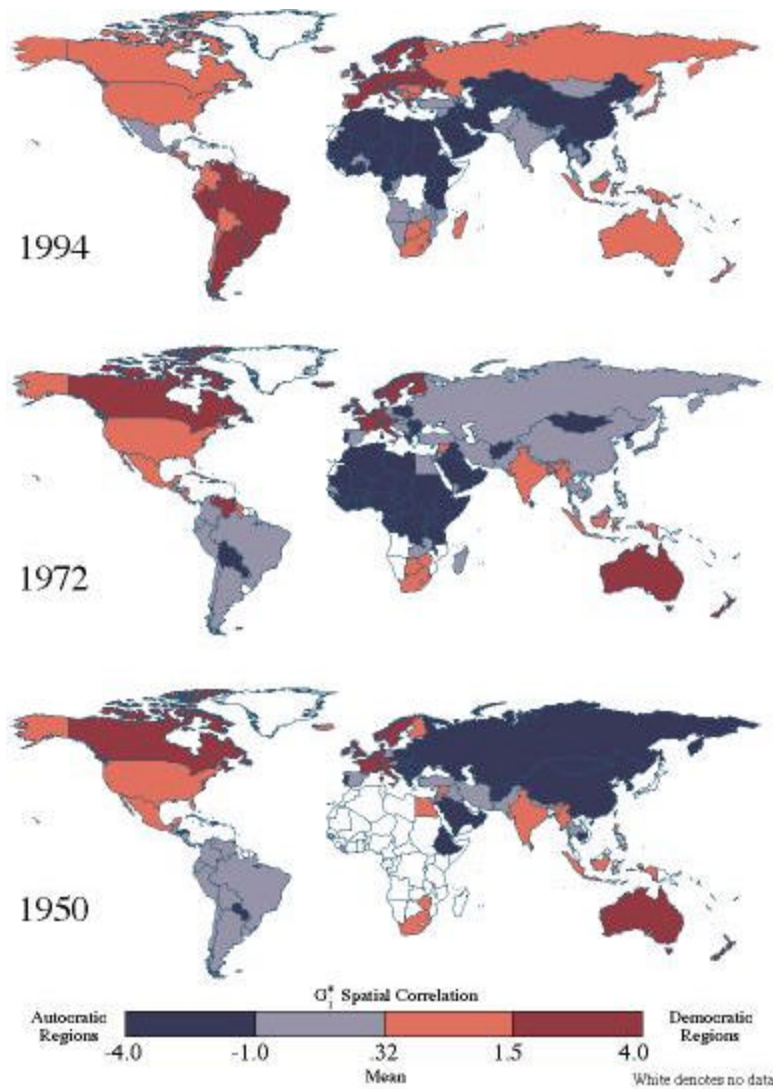
* all of the Moran's I values are significant at $p = .05$.

Africa in the early 1960s led to a sizable decrease in the aggregate extent of democracy in the mid-to late 1960s as pre-independence arrangements for democratic polities collapsed. The increase in democracy in the late 1970s and 1980s is an indication of Huntington's (1991) "Third Wave" of democratization, though the biggest increase in the global measure post-dates Huntington's pinpointing by about 5 years. The spatial autocorrelation measure, Moran's I, is significant at $p \leq .05$ for all years. Caution must be used in interpreting the Moran's I values over time since the value is dependent on the number of cases. Regardless of the overall level of democracy in the world-system, democracies are geographically clustered. Since the big increase in the average democracy score in 1991, the Moran's I statistic is decreasing as more countries have

become democratic and the obvious geographic clustering of the Cold War period has ended.

A noteworthy development in quantitative geography has been the development of methods to identify and measure local differences across a set of spatial units; rather than global measures of clustering, such as Moran's I, local indicators of spatial association (termed LISA by Anselin, 1995) are increasingly used to dissect the global statistic into its local components. The reversal of emphasis from similarity to differences allows the production of local statistics that can be mapped to help in the identification of the places that contribute most to the overall pattern (Fotheringham, 1997). In diffusion studies, the calculation of local spatial statistics enables pinpointing of "hot spots." The G_i^* statistic (Ord and Getis 1995) allows detection of local pockets of spatial dependence which may not be apparent in global statistics, like Moran's I, or even on maps of the phenomenon of interest like Figure 1. The measure and its display allow us to address the idiosyncrasies of local contexts. The method is ideally suited to the ESDA strategy of calculation, visualization, and mapping in a GIS framework and is part of a growing trend of integrating spatial analysis and GIS (Anselin and Getis 1992). The G_i^* statistic is therefore a case-by-case measure of spatial association and distinguishes between correlation of low-low values of democracy (a low value in a country similar to low values of its neighbors) and high-high correlation.

The maps of the local indicators of spatial association in Figure 2 clearly identify the clustering of democratic and autocratic polities in 1950, 1972 and 1994. With a consistent mean value of the G_i^* statistics of .32 across the years of the study, we define democratic regions on the maps of Figure 2 as positive values greater than 1.5 and



autocratic regions as values less than -1.0. In 1950, the democratic regions were small and scattered, consisting of only a few polities in North America, Australasia and Northwestern Europe; by contrast, the autocratic region was large and centered in the Communist countries of Eastern Europe and the adjacent Middle East. South America is a region of moderate autocracy. By 1972, the democratic region was still limited to the three small regions (North America, Australasia and Northwestern Europe) while the strongly autocratic region has shifted to most of Africa north of Zambia. The Communist countries and South America are regions of moderate autocracy. By 1994, with 157

polities, the globe has dichotomized into two regions. The democratic zone includes the Americas (though Mexico and Cuba are outliers), Western and Southern Europe, and Australasia. The autocratic zone in 1994 has consolidated since 1972 and is contiguous from Southern Africa through the Middle East to central Asia and China.¹¹

The use of local indicators of spatial correlation thus allows a clear identification of the spatial division of the international system into democratic and autocratic zones at the end of the twentieth-century. There is, however, no certainty that this division is stable. The changes of the past half-century show that reversals are possible, maybe even likely, notwithstanding the democratic momentum of the past decade. Indeed, as noted in an earlier study (Lichbach 1984), monotonic transitions toward democracy are something of an historical rarity, rather than the rule.

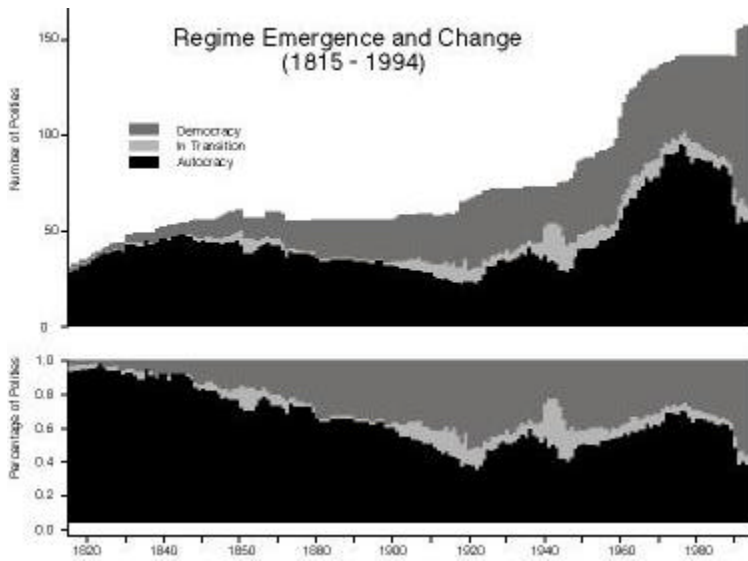
One challenge to this interpretation of spatial clustering of democratic scores is that the clustering is an artifact of the clustering of rich and poor countries on the world map. As we noted earlier, GDP/capita is correlated with the presence of democracy and therefore, it is plausible that the maps in Figures 1 and 2, as well as the time-space diagram in Figure 5, are surrogates for the distribution of wealth. To check this hypothesis, we examine the link between these two variables in a sample of over 4000 cases from 1953-1992. We use the POLITY III data along with the purchasing power parity data on gross domestic product per capita – in 1985 international dollars – taken from the National Bureau of Economic Research.¹² The expected relationship between wealth and democracy emerged strongly in both regressions.

We then examined whether the residuals from the 1992 sample are spatially random. The Morans' I statistic for these residuals showed evidence of strong spatial

clustering ($I=0.264$, $Z=2.8081$, $p\text{-value}=0.00498$). Furthermore, using the localized G_i^* measures we find evidence of strong, and statistically significant, local clustering of high values in Latin America and strong clustering of high negative values in Western Africa, as well as other more limited clusters. This simple procedure provides an important confirmation of the geographic clustering of polities with similar democratic scores, even when the most consistent predictor of democracy (economic development) is controlled. It thus provides a strong indicator of the effects of geographic location on the type of regime. Though we cannot claim to have ruled out bias from all possible omitted variables, these results do confront the most obvious challenge to the diffusion hypothesis: that the clustering of political authority characteristics is solely a function of the clustering of nations on the basis of their GDP. Even controlling for GDP/capita, there remains strong clustering of the political democracy scores.

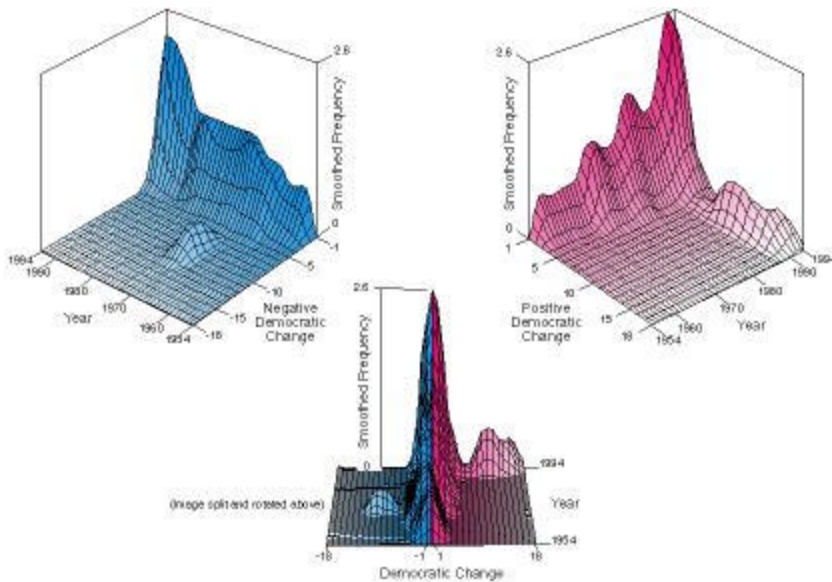
Temporal Diffusion of Democracy

The general international trend towards democracy has not been without reversals. The long view of changes in regimes since 1815, categorized as democratic, autocratic or in transition, is shown in Figure 3. Democracy's growth has occurred in fits and starts, with shifts towards democracy in the nineteenth-century followed by shifts towards authoritarianism between 1920 and 1935 and again between 1950 and 1975. Such reversals happen in two ways. First, groups of countries once democratic may revert *en masse* to more authoritarian governmental forms, as in many African countries in the mid 1960s. A second way in which the international system becomes more authoritarian



occurs when groups of newly formed states enter the international system with authoritarian forms of government and become more democratic over time, as in the former Soviet Union. The most dramatic absolute and proportional shift to democratization has occurred in the past decade (Figure 3).

Huntington (1991) identifies three periods in history (1828-1926, 1943-1962, 1974-) during which liberalization and partial democratization have occurred. “Waves” are identified when changes toward democracy clearly outnumber changes towards autocracy. Each wave of democratization has been followed by a period of reversals in which some countries reverted to non-democratic rule (1922-42:1958-75). This trend, which is recognizable in Figure 3, has been described as reverse waves: “In one sense, the democratization waves suggest a two-step-forward, one-step-backward pattern. To date each reverse wave has eliminated some but not all of the transitions to democracy of the previous democratization wave” (Huntington 1991:25). In identifying the repeated incidence of temporally proximate regime changes, Huntington (1991:30) takes



democratization waves and reversals as manifestations of a more general phenomenon in politics. At certain historical periods or “critical junctures”, similar events happen more or less simultaneously within different countries or political systems.

Further evidence of the ebb and flow of democratization is provided in the wire-frame diagram (Figure 4). In this diagram, only those polities exhibiting changes are displayed; in other words, only non-zero values of democracy are shown. The spine of the graph between -3 and +4 indicates that most shifts are small; relatively few greater shifts are visible and these are confined to the 1968-75 period for changes towards autocracy but are more temporally diffuse for changes towards democracy. Viewing the wire-frame from its separate perspectives clearly shows the developments of the rise of authoritarianism in Africa during the 1960s and early 1970s and the marked trend towards democratization between 1988 and 1994. The “waves” of democracy had an associated counterpart, namely the diffusion of autocracy. This relationship is most obvious in sub-Saharan Africa during the 1970s and 1980s, when only a few countries, such as Senegal and Botswana, were not classified as authoritarian (Figure 1). There is no

obvious theoretical reason why a democratic wave must be offset by an authoritarian wave. However, empirically this seems to have been the case both in the 1970s and in the late 1980s/early 1990s (Figure 4).

Looking more closely at the negative changes on the graph, during the most recent periods (1993-94), there are a few failed experiences in democratic governance (Gambia and the Comoro Islands) but most other changes are small (shifts of one or two points on the 21 point scale). Contrary to many popular expectations, there are only a few cases of mild retrenchment away from democracy in the Soviet successor states. The earlier wave of retrenchment away from democracy visible on Figure 4 occurs during the 1968-1973 period in recently independent colonies, mainly in Africa or in semi-industrialized societies. The largest negative changes in the democracy score occurred in Lesotho, Malaysia, Somalia, and the Philippines, but substantial shifts towards autocracy also occurred in Kenya, Chile, Thailand, Zambia, South Korea and Turkey.

On the positive side of Figure 4, our data illustrate a corresponding increase in democratization during the 1969-1970 period in former colonies making advances toward greater political democracy, such as Malaysia and Benin. During the period 1980-1985, the beginning of the third wave of democratization is visible in Latin America, with large changes in Bolivia, Uruguay, Brazil, Argentina; Turkey also made considerable progress towards procedural democracy with a transition to civil rule. Later, in the 1988-1994 period, the graph indicates the laggard democracies in Latin America (Paraguay, Chile) as well as the arrival of the third wave of democracy throughout Eastern and Central Europe (Poland, Bulgaria, Czechoslovakia, Hungary, and Russia), and to a lesser extent,

in Asia (Taiwan, Nepal, Bangladesh, Pakistan, Fiji, and South Korea) and Africa (Algeria, Zambia, and Lesotho).

In examining the relationship between temporal and spatial aspects of democratic diffusion, our work also shows discrete changes in regimes that run counter to the trends of waves or sequences. One hypothesis is that internal domestic circumstances drive the democratic transition, while external influences affect the consolidation of autocracy. An alternative hypothesis is that both internal and external influences have impacts, but inertia overrides other considerations. Both hypotheses have a spatial component; the regional clustering of states with similar characteristics (or spatial heterogeneity across the globe) shows a clear correlation with regions of failed democratic consolidation or of democratic implementation. Africa in the late 1960s/early 1970s presents an example of such a clustering of failed efforts of democratization. Given domestic economic constraints, it is not surprising that autocracy continued. It is more difficult to explain how some countries in a region of failed democratic consolidation managed to go from rhetoric to reality by maintaining and consolidating the democratic ideals present at their independence.

One of the most distinctive features of Figure 4 is the large number of countries that underwent significant positive democratic change between 1988 and 1994. Although Bolivia, Argentina, Turkey, Uruguay, and Brazil registered large swings in the democracy values during the early- to mid-1980s, a more pronounced period of transition occurred after 1988. In 1988, South Korea, Pakistan, and Hungary witnessed positive changes on the democracy scale of five points or greater. The trend continued elsewhere in 1989 for Paraguay, Poland, and Algeria. Although these changes represent significant democratic change, it was the devolution of the Soviet Union and developments in Eastern Europe

Table 2: Net changes in democracy score between 1978 and 1994*

Latin America		Africa		Europe	
Country	Net Change	Country	Net Change	Country	Net Change
Uruguay	18	Cen. Af. Rep	17	Hungary	17
Argentina	17	Malawi	17	Ger. Dem. Rep.	17
Haiti	16	Benin	15	Albania	16
Chile	15	Lesotho	15	Spain	16
Bolivia	15	Mali	15	Bulgaria.	15
Paraguay	14	Niger	15	Czech. Rep.	15
Brazil	14	Zambia	15	Poland	15
Ecuador	14	Madagascar	14	Russia	15
Nicaragua	14	Mozambique	14	Rumania	12
Panama	14	Guinea-Bissau	13	Belarus	3
El Salvador	14	Congo	11	Slovakia	2
Dominican Rep	9	Senegal	7	Greece	2
Guatemala	8	Ethiopia	6	Moldova	1
Honduras	7	Ghana	5	Yugoslavia	1
Guyana	5	South Africa	4	Croatia	-5
Peru	5	Comoros	3		
Mexico	3	Gabon	3		
Colombia	1	Ivory Coast	3		
Venezuela	-1	Rwanda	3		
		Uganda	3		
		Cameroon	2		
		Kenya	2		
		Togo	2		
		Chad	1		
		Mauritania	1		
		Mauritius	1		
		Swaziland	1		
		Tanzania	1		
		Zaire	1		
		Sierra Leone	-1		
		Zimbabwe	-10		
		Gambia	-17		

* The table includes only countries that registered changes in authority structures

that led to the most concentrated wave of democratization. Of the nine changes in 1990, two-thirds occurred inside this region.

Despite popular impressions, shifts to democracy were not confined to Eastern Europe after 1989. In 1990, Zambia, Bangladesh, Taiwan, and Nepal registered

considerable gains and 1993 and 1994 saw important movements toward democratic institutions in Africa, especially in Lesotho, Malawi, and Mozambique. A positive net change on the democracy scale does not necessarily mean that the country is democratic at time t ; rather, it indicates that there has been a greater shift towards democracy than other shifts towards autocracy. Categorizing the net changes in the democracy scale between 1978 and 1994 by region indicates the almost unanimous change in Latin America (all except Venezuela have positive changes), 30 of the 33 sub-Saharan African states increasing on the democracy scale, and the countries of Eastern Europe showing large increases (over +10; see Table 2). Between 1958 and 1974, only Burkina Faso registered a positive net change on the democracy scale. More indicative of an aggregate trend towards authoritarianism, seventeen African countries had net negative scores between 1958 and 1974. Latin America's turn toward authoritarianism is represented by the negative democracy values that half of the Latin American countries showed between 1958 and 1973. Eight Latin American states (notably, Venezuela, Dominican Republic, Guatemala and El Salvador) showed a positive increase on the democracy scale.

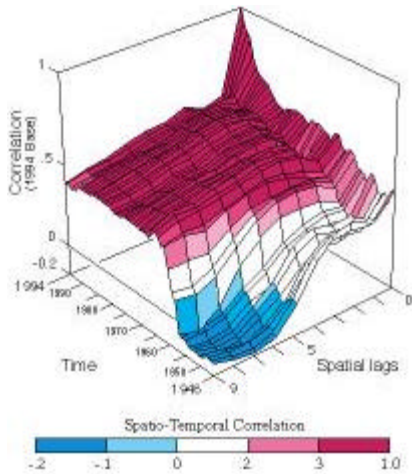
Spatial-Temporal Diffusion of Democracy

Having shown temporal and spatial patterns of democratization separately, we switch now to a space-time framework, since temporal cascades of democracy and authoritarianism have a strong geographical character. Whitehead (1996) connects temporal shifts in regime change to spatial spread, and identifies five sequences of democratization, concentrated in short periods of time and also regionally clustered. These are a) Western Europe, b) the Caribbean, c) Spain/ Portugal and South America, d)

Central Europe (followed shortly by Eastern Europe), and e) Africa. Similarly, “sequences of democratic breakdown... [have occurred] in Latin America in 1947-9 or 1963-6, or in West Africa in the mid-1960’s” (Whitehead 1996:6). Whitehead’s research identifies this “contagion” of regime change, examining the external influences or relevance of factors of “control,” and considers the connections between domestic and international forces in terms of “consent.”

To see the inter-relationships among geographical and longitudinal changes in the distribution of democracy, we charted the spatial-temporal correlation from 1946 to 1994 (Figure 5). This three-dimensional figure can be examined in three ways; a) for the same year (holding time constant), looking at changes with increasing geographic distance or lags (spatial autocorrelation); b) for the same spatial lag (holding distance constant), looking at changes over time with increasing temporal lags back to 1956; and c) examining the inter-correlation between space and time with increasing spatial and temporal lags. To clarify the distributions, we use magenta for significant positive autocorrelation and cyan for significant negative correlation; significance is at the .05 level.

The values displayed on Figure 5 show the respective time-space lagged correlation with the 1994 level of democracy. Using the 1994 democracy values as a base, we can identify changes in these values back through the 48 years of the series to 1946 as well as across 9 spatial lags, the minimum number of spatial lags needed to span the globe. As an example, consider the democracy values for Brazil; the 49 correlations of the yearly values for 1994 and each of the values for Brazil for the previous years, as well as the correlation of Brazil’s 1994 democracy values with those of its contiguous



neighbors (lag 1), two-step neighbors (lag 2), etc. up to 9 spatial lags for all years are combined with similar time-space correlations for the other 156 polities in the study to produce Figure 5.

The dominant picture of the distribution is stability across space and time. Moving back in time from 1994, the plateau of values for lags 1-9 is gradually sloping for about 35 years (back to 1960). The changes in the global distribution of democracy following the entry of the African states have already been noted. The correlation surface plunges to a sink of significant negative correlation coefficients with a time lag of over 35 years from 1994 and with more than 5 spatial lags from the state under consideration. Not surprisingly, a comparison of temporal and spatial lags shows that time offers a better prediction of democratic status than propinquity. The level of democracy at $t-1$ for a country has a higher correlation with the current value than either current or earlier values for neighboring states. The graph suggest that the future calibration of an endogenous predictive space-time model should include a few temporal predictors and two spatial lags as well as interactive terms.

The decrease in the correlation coefficient backward through time for the same spatial lag is very gradual to about 1960. It matters little whether the spatial lag is 1 or 9. The biggest decreases are in the range of zero to 15 temporal lags with spatial lags = 0 (correlating the values for the same country over time). At time lag 10 and spatial lag zero, the correlation coefficient is still +0.7. By contrast to the temporal correlogram, the spatial correlogram shows a dramatic decline in the coefficients from the zero to the first spatial lags. At the first time lag, the decline is from .9 to .7, but it is consistent all along the valley between the zero and first order spatial lag. Most interesting is the increase in the correlation coefficients from the first to the second order spatial lag as shown by the small ridge on the diagram. After the second order lag, there is a very gradual slope with increasing spatial lags (back to lag 9). Geographic distance does not have much effect on the overall distribution of democracy scores, with the values of polities strongly correlated to the values of all neighboring states in the region and stretching to distances up to 9 lags. After the 1960s, the distribution of democracy around the world was clustered in large regional masses. By 1994, as was seen in Figure 2, this spatial heterogeneity is evident on the world map with two large regional concentrations of democracy and autocracy.

The space-time diagram shows a high degree of regularity and evenness across time and space dimensions. This bodes well for the development of a diffusion framework for the study of the growth of democratic regimes over time. While we are not yet able to state the exact nature of the diffusion process (contagious, hierarchical, etc), the three-dimensional distribution in Figure 5 permits confidence that the changes are regular and highly dependent in space and time. Though it might be too much of a stretch

to claim that the process is one of “democratic dominoes”(Starr 1991), since such geometric regularity of spacing and timing is rare in international politics, we can agree with Starr that diffusion should have a central role in a “broad linkage politics framework” integrating domestic factors with global, regional, and neighboring external influences. Geographical proximity increases the number of interactions that can promote democracy or authoritarianism between countries; the closer countries are to each other, the greater the number of possible linkages through which democracy can be promoted or spread.

The Diffusion of Democracy in Africa and Latin America

In the late 1980s and early 1990s, it was easy to see the *zeitgeist* that dominated the international scene. The foreign policy of the United States and its allies combined with the crises of authoritarian regimes in some world-regions to push the democratic agenda. Linz and Stephan noted that “[w]hen a country is part of an international ideological community where democracy is only one of many strongly contested ideologies, the chances of transitioning to and consolidating democracy is substantially less than if the spirit of the times is one where democratic ideologies have no powerful contenders” (1996:74). Through an examination of recent changes in regimes in Latin America and Africa, we offer several plausible explanations that might account for the patterns that emerged so clearly in the aggregate data. We are not challenging previous attempts to explain the rise of democracy or authoritarianism in any particular country. Rather, we

are looking for plausible explanations that might account for the spatial autocorrelation prominent in our aggregate results in Figures 4 and 5.

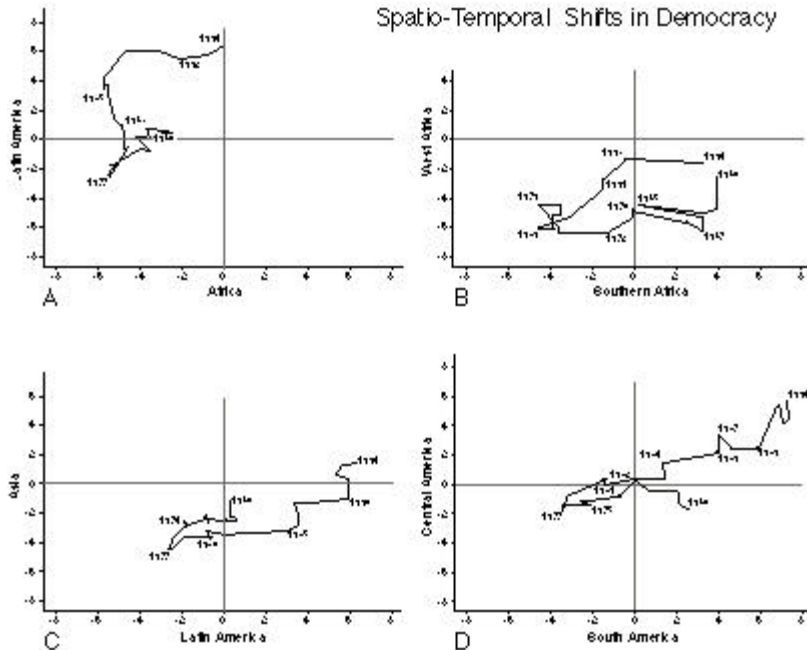
Africa: During 1978-1994, the southern African states of Malawi, Lesotho, Zambia, and Mozambique made some of the most pronounced movements towards democracy (Table 2). Their proximity or inclusion in what are the Front Line States (FLS) suggests that developments in and around South Africa generated dramatic shifts in Southern African politics. Zambia, Mozambique, Malawi, Lesotho, Swaziland - and later post-independence Zimbabwe¹³ and Namibia - have a history of institutionalizing cooperation, collaboration, and high-level communication dating back to the early 1970s. Zambia played an essential role in the liberation of Zimbabwe, Angola, Mozambique, Namibia and South Africa, and after its independence in 1980, Zimbabwe performed a similar demonstration effect for both South Africa and Namibia (Scarritt and Nkiwane 1996). These countries share a colonial and post-colonial history where diffusion and mobility of people, labor, and ideas has been the norm rather than the exception. The SADCC reformed itself into the Southern Africa Development Community (SADC) in 1992 when South Africa became a member instead of a political target.

The fragility of democratic institutions decreases the chances of successful democratic consolidation, and the risks of reversal appear magnified in Southern Africa, a “potential, though very fragile, zone of democratizing governments and economic recovery.” (Lewis 1996:129). Other spatially clustered difficulties such as ethnic divisions, poverty, environmental degradation, economic difficulties, and colonial history increase the difficulty of consolidation. Without institutional stability or established traditions, democratic consolidation seems unlikely. Post-independence Africa lacked

both experience with democratic processes and established political institutions. Though British colonies generally had a somewhat stronger foundation for political institutions, their post-independence existence was fleeting; French colonies had few institutions; and the Lusophone colonies and the Belgian Congo were even less prepared. The colonial powers appeared generally relieved to be granting independence. Despite some efforts to “impose” democratic transitions on former colonies, little preparation was given to the post-independence period. The stakes for power were highest, the likelihood of democratic consolidation lowest, and the existence of democracy most tenuous in the turbulent 1960s. Through the institutionalized cooperation against South Africa, the FLS/SADCC countries were able to exercise some influence over each other. Joseph (1997) notes that most “ruler conversions” took place under duress as a last minute grasp at power as African leaders began to advise each other on how to hold democratic elections without being voted out of office.

In order to examine the inter-relationships between adjoining regions and to detect any cross-regional transfer of democratization, we graphed the average democracy score for selected world regions, two at a time (Figure 6 a-d). The graphs are scaled so that the zero point on the democracy scale divides the graphs into four zones. With a starting point of 1960 (when most African states became independent), we can examine the lead and lag effect of each of the regions and we can also identify four kinds of trends towards democratization or autocratization or combinations of both.¹⁴

Africa is a laggard region in democratization compared to Latin America (Figure 6a). The spatio-temporal shift in the average regional democracy in the top-left graph shows clearly that Latin America has consistently maintained a higher score since 1960.



Both regions became more autocratic for the first 16 years of the series, but after 1977, Latin America first and then Africa (after 1989) became more democratic. By the end of the study period, the average level of democracy for Latin America (+7.2) is significantly higher than the mean African level, which barely reaches zero. Though not geographically contiguous, Latin America and Africa were clearly affected by the “winds of change.” With the end of the Cold War, the global discourse changed to an ideology of political democracy. Latin America had been the scene of many surrogate conflicts between the superpowers during the Cold War (especially Central America in the 1980s) but the trend towards democratization was firmly established by 1980. Africa, by contrast, preoccupied by the South African struggles, became the target of a type of “aid-hostage democracy” after 1990 as Western aid donors made foreign aid conditional on political reforms, multi-party elections and economic liberalization (Diamond 1994). The effects seen in Figure 6 might be attributed to this promotion of democracy.

A comparison of two major sub-regions within Africa (West and Southern Africa) sheds more light on the trends towards democratization in the continent. The top-right graph (Figure 6b) shows that Southern Africa (south of Zaire) has been consistently more democratic than West Africa (sub-Saharan states west of Cameroon). Until 1970, the average value on the democracy index was positive for Southern Africa compared to the negative value for the West African states. However, both sub-regions become increasingly autocratic between independence and 1989. There was a noticeable democratic trend in West Africa in the mid-1970s but this proved short-lived. Since 1989, both regions have demonstrated a democratic trend. However, this seems to have stalled in West Africa while continuing strongly in Southern Africa. By 1994, the trend-line had come a full circle to a point very close to its initial state in 1960. West Africa is still a region of autocracy in the mid-1990s (Figure 2).

The constraints on regime options in contemporary Africa are many. African countries have received both multiple pressures to shift towards democracy and advice on how to establish sustainable democratic institutions. Diamond (1994), for example, argues that Western donors and African leaders have reciprocal responsibilities, to ensure civil liberties and reduce military spending on the one hand and increased foreign aid and decreasing the stock of debt at a fixed rate, on the other. One of the few African states that has maintained a functioning multi-party system, Botswana, nevertheless has had one-party dominance from the 1960s to the 1990s, though opposition representation increased slowly over time (Bratton and van der Walle, 1997; Good, 1992). Yet, the presence of a parliamentary system and high voter turnout has not been matched by a civil society as expansion of the state apparatus over the past quarter-century has reduced

the pool of civic activists, incorporated into the state apparatus (Stedman, 1993).

Botswana, obviously scores high on the democracy score used in this paper, as well as on civil liberty indicators, but an argument that political representation has not been matched by other democratic indicators finds substantial evidence. Unlike many African states, Botswana is small and relatively homogenous in ethnic terms. These differences, as well as ideological competition during the years of the Cold War that generated a bipolar lineup of the African countries, makes Botswana a problematic example of the success of Western notions of democracy in the continent.

South America: In Latin America, the same countries that turned toward authoritarianism in the 1960s and 1970s (Uruguay, Argentina, Chile, and Brazil) all became democratic by 1990. Authoritarianism and democracy swept across Latin America before continuing to other parts of the globe; the autocratic wave of the early 1960s was followed in Africa later in the decade and the democratic wave of the 1980s reached much of Africa and Eastern Europe about a half-decade later.

A number of specific events, internal political developments, and economic crises conspired against South American democracy in the 1960s and early 1970s, producing a wave of authoritarianism and a series of military coups across the entire region - Brazil in 1964, Argentina in 1966, Peru in 1968, Uruguay in 1971, and finally Chile in 1973. Although specific events triggered the various military coups throughout the region, underlying structural causes also played an important role. According to O'Donnell (1973), the perceived need to "deepen" industrialization, switching from the import-substitution phase of industrialization to a more capital-intensive form of accumulation, required more authoritarian forms of governance. Authoritarian regimes were able to

direct investment towards capital goods, transferring resources from labor to capital through repression (O'Donnell 1973). Although this thesis has been challenged, it is generally agreed that important economic problems such as dwindling foreign reserves, wildly fluctuating prices in export products, growing debt, and inflation undermined democracy (Stepan 1971, 1973). In addition to economic factors encouraging the rise of authoritarianism, an important change in military doctrine espoused by the U.S. spread across Latin America and redefined the role of the military in politics.

Within the context of economic crisis and political stalemate in the late 1950s came rising demands from previously excluded social groups. The successful Cuban revolution attracted significant notice in the military barracks throughout of the continent. In Brazil, the “rhetoric of mobilization and radicalization...in the wake of the Cuban revolution, was feared by many officers as the prelude to the destruction of the traditional army” (Stepan 1971:154). Partly in response to developments in Cuba, U.S. military assistance programs to Latin American increased their focus on counter-insurgency as military leaders began to study the close connection between poverty and the political discontent that fostered guerrilla movements throughout the region. Formally established in 1949 with the help of a United States military mission, the ESG (Escola Superior de Guerra) brought together military officers and civilians who studied subjects normally outside the military's immediate interest, classes that focused on economic development and civic action. In addition to training in Brazil, high-ranking officers took classes in the US (Fort Leavenworth, Kansas). In the years leading up to the military coup in 1964, then, a growing segment of the military establishment and elite sectors of society shared a similar educational experience. Not only did classes focus on the

political and economic problems Brazil currently faced, the ESG developed a standardized approach so that in the years leading up to the Brazilian military coup in 1964, a growing segment of the military establishment and elite sectors of society shared a similar educational experience. The military gained new confidence in its ability to direct Brazil's economic and political development, and shifted the bounds in civil-military relations after the overthrow of President Goulart in 1964 (Stepan 1971).

Similar political-economic dynamics soon transpired in Peru and Argentina. Although the Peruvian military implemented a very different set of policies than the Brazilian military regime, its self-declared role in society was similar. In Peru, the Center for Higher Military Studies (Centro de Altos Estudios Militares, CAEM) performed virtually the same function as Brazil's ESG and the Peruvian military seized power in 1968 in part to prevent what they viewed as an inevitable peasant revolution. In a chaotic political situation exacerbated by economic crisis, the Argentine military seized power in 1966. Although somewhat more fractionalized than their Brazilian and Peruvian counterparts, the leading group within the Argentine military sought to address the same problems that preoccupied their Latin American neighbors. "The real enemy no longer was external aggression or even an internal military threat, but rather political or ideological dissent and economic underdevelopment, both of which threatened the 'breakdown of national internal cohesion' (Smith 1989:41).

While internal political and economic developments formed the basis of authoritarian rule in Latin America during the mid- to late-1960s, these trends were part of a wider diffusion of socio-political and economic difficulties brought on by the changing economic role of the countries in the region. Nevertheless, the diffusion of a

new military doctrine aimed at domestic insurgency contributes to an explanation for the rise of authoritarianism in Latin America. Geographical proximity was central to the process in two ways. First, similar economic challenges and crises in the region facilitated the spread of solutions that, at first, seemed successful in curbing rebellion. Military establishments sought institutional survival and Brazil provided one possible model. Second, through military assistance and training programs, U S administrations helped the Latin American military forces fight left-wing movements in the Western hemisphere by promoting the U.S. view of security. At this stage, the U.S. external promotion was authoritarian, and it was not until the Carter Administration came to power in 1977 that U.S. policy changed to the promotion of democracy as the natural political ally of capitalist development. During the succeeding Reagan administration, this policy was reversed as the 'second Cold War' was fought through proxy forces in many parts of the Third World, including Latin America. (O'Loughlin, 1989).

Innovations in political institutions continue to spread throughout Latin America. What began as an institutional feature to limit the power of strong, personalist regimes, constitutional prohibitions against presidential re-election have begun to change. Once Argentina's battle with inflation was over and President Menem successfully changed the Argentine constitution to allow his re-election in the late 1980s, Brazil and Peru followed this example. Each constitutional change allowing the president to run for a second term followed very similar circumstances (particularly in Argentina and Brazil). In addition to innovations in the political realm, economic policy convergence has been particularly pronounced in Latin America. The privatization of public utilities in the energy and telecommunications industries has swept Latin America in the last five years. Much of

the government sell-off stems from the need to cut soaring government budget deficits to reassure foreign investors. Although each country's privatization scheme varies widely in size and scope, Chile's economic success has clearly encouraged other Latin American countries to adopt similar measures. In addition to common economic and political conditions, the spread of institutions and ideas in Latin America clearly results from sharing a common language. Facilitated in part by language, the transmission of information across Latin America via television is another important factor.

A comparison of the democracy scores of two Third World regions, Latin America and Asia, is presented in Figure 6c. As in the African-Latin American comparison, Latin America had been more democratic, earlier to develop a trend towards democracy (1977 compared to 1985 in Asia), and both regions became significantly more autocratic between 1960 and 1977. By 1994, the mean score for Asia had risen to +1.8 while the score for Latin America exceeded +6. While modest economic growth in Latin America of the past decade has been paralleled by changes towards democracy, the correlation between political and economic change is much weaker in Asia. One major difference between the continents is the role of the major external promoter. For Latin America, the U.S. has pushed a democratic agenda since the end of the Reagan Presidency as a corollary of economic, military and development aid; Japan as the major aid-giver in Asia does not tie aid to politics as directly and contributes substantial foreign aid to repressive regimes (Grant and Nijman 1997).

The final graph compares the spatio-temporal trends for the two regions of Latin America, Central America (north of Colombia) and South America (south of Panama). Since 1977, the point at which both regions shifted from the trend towards more

autocracy to a trend towards more democracy, the mean democracy values for both regions have developed in a symmetrical manner, tracing a 45-degree slope up to the upper right. Since 1977 and especially since 1982, the regional averages have been similar. We can conclude that the Latin America is one of the most homogenous of the world's regions with respect to the levels and trends of democratization.

The case studies reported here stress external influences on democratization, especially the roles played by regional superpowers, extra-regional agents, and the interconnections between the political elite of the polities. As a consequence of propinquity, the states of the regions share economic and social similarities and by relying solely on geographic proximity as a predictive tool, one might expect similar political outcomes. But as we have shown earlier in the article, democratic scores cluster geographically more than expected by similar rates of economic development. Snowballing seems fairly common as new political ideologies roll through the regions, as witnessed in the examples of military repression in Latin America and the collapse of pre-independent democratic rules in Africa in the 1960s and the trends towards democracy in both regions in the mid-1980s in Latin America and after 1989 in Southern Africa. Common to both regions is a contextual element that draws upon regional similarities and reinforces them by spreading political ideology between polities in a regular fashion.

Conclusions

We began our work by pointing to some apparent deficiencies in existing research on regime changes and the transitions to democracy and autocracy. While much valuable work has been completed on the mechanisms of democratization, democratic theory, the particular conditions in states undergoing transitions, and the consequences of democracy in foreign policy and economic development, an overarching view of trends and global patterns is missing. In this paper, we have provided evidence that the trends since 1945 are not uniformly towards democracy. Though both the ratio and number of democracies in the international system are at the highest levels ever recorded, the so-called “third wave” democratization wave is a recent phenomenon, which, like previous waves of democratization, is susceptible to reversal. In the longer perspective of the past half-century, we noted both geographic and temporal clustering of autocracies as well as democracies.

In this article, we have provided strong and consistent evidence of the temporal cascading of democratic and autocratic trends, spatial clustering of regime types, and strong temporal-spatial autocorrelation. This latter clustering is most clearly visible in the space-time correlogram in Figure 5, but it can also be discerned in the studies of regime changes in Southern Africa and Latin America. Our exploratory spatial data analysis presents visualization of the principal patterns and summary statistics indicating the nature of the trends. In an accompanying movie available from our web site, we have shown how the ebb and flow of democracy is regionally variable. Like Starr (1991), we

conclude that analyzing regime change will benefit from a “domain-specific” position. We caution against assuming that “universal laws” govern the growth of democracy. It remains important to recognize that the process is apparently affected by regional and local contextual elements that remain strong and important.

A second caution relates to the search for a single, dominant form of diffusion. The spread of democracy appears to be facilitated by elements shared by countries with similar characteristics shaped by geography. We provided one illustration of this contextual element in the diffusion of a national security doctrine in the Latin American case study. In other cases, severe economic crises strike a group of countries with similar accumulative and productive processes, leading to a new kind of political dynamics that challenge the existing state structures; this type of transition is witnessed in the events in Eastern Europe after 1989 (Boswell and Peters 1989). Finally, cooperation in regional economic and political organizations facilitates the transmission of democratic as well as authoritarian institutions. Our discussion of southern Africa illustrates this externally induced change in regime type. Since the diffusion of democracy is transmitted through different channels within each region, there may not be a single conduit through which democracy diffuses.

We stressed the important role played by external conditions in the promotion of both autocracy and democracy. The common mode of research relating the economic and social characteristics of a country to the political characteristics of its polity unfortunately ignores both external agency and regional contagion derived from the geographic settings of the polity in review. Our study argues strongly for simultaneous incorporation of the spatial effects on regime change in order to build a more complete picture of the timing

and nature of political changes. Future work may profitably examine the goals and techniques of promoters as a means of determining future democratic locations.

The late twentieth-century is a time of Janus-like reflection of looking both back at the political developments of the past 100 years and forward to the next century. While our century by most criteria has been the most violent in history in terms of destruction of human life, whether it marks a major transition in the dominant mode of political arrangements within countries - from power seizure, appointment or inheritance to elected representatives; from autocrats without power limitations to political leaders subject to all sorts of constraints - remains to be seen. Though more people are living under democratic rule and have the associated civil liberties such as freedom of expression, prior reversals suggest caution to those who are prematurely celebrating the victory of western-style liberal democracy. Though we do not wish to use our space-time framework to predict likely outcomes for the next few decades, any simple projection of the trends of the past decade is very likely to be well off the mark.

The spread of democratization brings with it much reckless speculation. Western leaders have characterized these changes as important ideological victories that bring the world to a considerably safer state of affairs. One scholar has summarized the statistical evidence as producing a result as “close as anything we have to an empirical law in international relations”(Levy 1988:662). Democracies do not seem to fight wars against one another directly. Will this mean a democratic world will be one without global warfare? Classic liberal philosophical thought (i.e., Immanuel Kant, 1795[1991]) has been brought back into play in an early 20th Century tradition (*e.g.*, Wilsonian idealism) in order to attack the main tenets of realism in a post-Cold War context. Whether *norms*

or *institutions* or both will ultimately be seen as the mechanism standing behind the democratic peace is unclear. What our analysis adds to this line of research is the sobering result that not only is democratization not ineluctable, but the regional contexts within which it operates are clearly very powerful, showing evidence of both ebbs and flows as well as strong inertia. Indeed, we have found that a regional context is important in understanding the link between regime change and violent conflict (Gleditsch and Ward, 1998).

Will a democratic world be more prosperous, especially if democratic norms and institutions mitigate global and regional conflicts? Will it be true that democrats avoid war with other democrats, even when all non-democrats reside only in the history books? Whatever the larger trend is, our results show that simple extrapolation of democratization is likely to miss important and interesting results away from the broad correlation, results likely to be guided by the powerful spatial clustering of democratic changes.

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Figure Captions

Figure 1. Geographic Distribution of Democracy Scores, 1950, 1972 and 1994.

Figure 2. Geographic Clustering of Democracy Scores, 1950, 1972 and 1994.

Figure 3. Changes in Regime Types, by Number and Proportions, 1815 to 1994.

Figure 4. Distribution of Negative and Positive Changes in the Democracy Scores, 1954 to 1994.

Figure 5. Correlogram of Democracy Scores in Space (9 lags) and Time (48 lags).

Figure 6. Shifts in Democracy Scores by Regions: a) Latin America and Africa; b) West and Southern Africa; c) Central and South America, and d) Asia and Latin America.

Appendix I: Coding Rules for Polity III Political Democracy (adapted from Jaggers and Gurr 1995:472)

Authority Characteristic	Democracy “Points”
<i>Competitiveness of Political Participation</i>	
Competitive	3
Transitional	2
Factional	1
Restricted	-1
Suppressed	-2
<i>Regulation of Political Participation</i>	
Regulated	0
Factional or Transitional	0
Factional/Restricted	-1
Restricted	-2
<i>Unregulated</i>	0
<i>Competitiveness of Executive Recruitment</i>	
Election	2
Transitional	1
Selection	-2
<i>Openness of Executive Recruitment</i>	
Election	1
Dual: Hereditary & Election	1
Dual: Hereditary & Designation	-1
Closed	-1
<i>Constraints on Chief Executive</i>	
Parity or Subordination	4
Intermediate 1: between ↑ & ↓	3
Substantial Limitations	2
Intermediate 2: between ↑ & ↓	1
Slight to Moderate Limitations	-1
Intermediate 3: between ↑ & ↓	-2
Unlimited Power	-3
Total Scores Ranging from -10 to +10	∑ Democracy Points

Notes

1 The term “polity” was introduced by David Easton (1965) who distinguished between three levels of analysis in political systems: the authorities, or the individuals who hold power, the regime, or the state apparatus, and the polity, broadly taken to include the institutional, political structure. Each higher level subsumes each prior, lower level.

2 Polity III is a compendium of measures of political participation, competition and regulation. The total number of country-years in the data set is 6,068 for the period 1946-1994. Six percent of the cases (i.e., 342 country-years) are assigned missing data values because polities were in transition or experience internal civil conflict or external invasion.

3 Indeed, the European origins of liberal democracy is reflected in the concern expressed by African commentators such as Nyerere (1994) Makinda (1996) and Monga (1996), who challenge the possibility of transporting democracy as a particular form of political organization to a different cultural environment.

4 An unpublished study by Gleditsch (1996) found that the association between a country’s level of democracy and that of its contiguous neighbors was of a substantive magnitude comparable to that of the relationship between level of democracy and level of economic development (as measured by energy consumption) for a pooled sample from 1953 to 1993

5 The G_i^* statistic is defined as:
$$\frac{\sum_j w_{ij} x_j - \sum_i (w_{ij} + w_{ii})_i \bar{x}}{\hat{S}_x \sqrt{n \sum_j w_{ij}^2 - \sum_i w_{ij}^2 / (n-1)}}, j \neq i$$
 where w_{ij} denotes element

i, j in a binary contiguity matrix and x_j is an observation at location j . The G_i^* measure is normally distributed and indicates the extent to which similarly valued observations are clustered around a particular observation i . A positive value for the G_i^* statistic at a particular location

implies spatial clustering of high values around that location; a negative value indicates a spatial grouping of low values. For technical details, see Ord and Getis (1995).

6 We thank Arthur Getis for his discussions with us on this point.

7 Moran's I is given by $\frac{n}{\sum_i \sum_j \tilde{w}_{ij}} \sum_i \sum_j \tilde{w}_{ij} \frac{(x_i - \bar{x})(x_j - \bar{x})}{\sum_i (x_i - \bar{x})^2}$ where \tilde{w}_{ij} is an element of a row-

standardized spatial weights matrix w that indicates whether or not i and j are contiguous. The significance of Moran's I is assessed by a standardized z-score that follows a normal distribution and is computed by subtracting the theoretical mean from I and dividing the remainder by the standard deviation.

8 The following examples date from 1990 but are representative of the contiguities made for all years. The US is a land neighbor of Mexico and Canada and a neighbor of Russia and Cuba by virtue of a short maritime separation. To provide a Trans-Atlantic link, the US is made contiguous to the UK, based on cultural and political similarity. Other non-obvious connections are Cuba to Haiti, Jamaica and Mexico; Madagascar to the Comoros and to Mozambique; the Comoros to Tanzania, Mozambique and Madagascar; Indonesia to Malaysia and Singapore, Australia, Philippines and Papua New Guinea; Australia to New Zealand; Japan to Russia, China and the Republic of Korea; Trinidad to Venezuela; Cyprus to Turkey, Lebanon and Syria; and Taiwan to China. Iceland, Mauritius and Fiji remained as islands with no neighbors in the international system.

9 The contiguity matrices used in our study are available in ASCII format from the <http://www.colorado.edu/IBS/GAD/Data/Cmats.html>. However, note that these matrices do not include the US – UK contiguity.

10 The selection of the maps in Figure 1 for presentation displays the major changes over the

half-century in a few maps. Color maps of the distribution of the democracy scores for each year are <http://www.colorado.edu/IBS/GAD/spacetime.html>. We thank Barbara Battenfield for her advice in this map-making enterprise and Dennis Ward his multimedia authoring expertise.

11 Statistical outliers like South Africa on the 1972 and 1994 maps are caused by the isolated location of a high value in a region of low values on the democracy-minus-autocracy index or vice-versa.

12 The GDP/capita data are from the PENN world tables at <http://www.nber.harvard.edu>. The results show that the extent of political democracy is a strong correlate of gross domestic product per capita. The results of the regression are shown in the following table:

Democracy Score as a Function of GDP per Capita, 1953-1992				
Variables	Value	St. Error	T value	Pr(> t)
(Intercept)	-3.90	0.147	-26.49	0.0000
GDP per capita	0.0010	0.00003	37.8669	0.0000
$F_{(1,4272)} = 1434$				

We also examined the cross section of cases in 1992, which show the same basic relationship: a strong positive association between higher levels of GDP per capita and higher levels of democracy as seen in the following table:

Democracy Score as a Function of GDP per Capita, 1992				
Variables	Value	St. Error	T value	Pr(> t)
(Intercept)	-1.1550	0.8700	-1.3276	0.1880
GDP per capita	0.0008	0.0001	7.3273	0.0000

$$F_{(1,82)} = 53.69$$

13 Zambia and Zimbabwe have a long history of cooperation, dating from the colonial period and the later incorporation of both into the Federation of Rhodesia and Nyasaland in 1953. These two states were weakly linked via the Southern Africa Development Coordination Conference (SADCC) to other countries in the region surrounding South Africa.

14 The upper-left quadrant shows democratization for the region plotted on the vertical axis and autocracy as the dominant feature of the horizontal axis region; and the bottom-right quadrant shows democratization for region on the horizontal axis and democracy for the horizontal axis region. Directions towards the upper-right of the graph show that both regions are moving towards democratization; a trend to the bottom-left quadrant by contrast indicates more autocratization for both regions. Specific years are marked on the graphs to aid in their interpretation.