

# Territory, Proximity, and Spatiality: The Geography of International Conflict<sup>1</sup>

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This essay presents an overview of the literature on the ways in which space, spatiality, and proximity are theoretically important in the examination of international conflict behavior, for example, to agent-structure models of opportunity, notions concerning diffusion, the loss-of-strength gradient, and the effects of distance and space. The opportunity and willingness framework is used to organize both the literature and the discussion, which builds on Diehl's (1991) seminal overview of geography and conflict.

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A recent theme of the annual meeting of the International Studies Association was "The Construction and Cumulation of Knowledge." Both construction and cumulation of knowledge are central to the purposes of essays in the "Reflection, Evaluation, Integration" section of this journal, with cumulation asking scholars to focus on the ways and the extent to which our collective theory and research endeavor has built upon itself. One approach to cumulation and integration involves bringing together the theory and research falling within broad cross-disciplinary categories. That is, scholars will often categorize their work as reflecting a political economy or a political psychology approach or perspective. Another arena that has made a significant contribution to the study of international relations, but has received relatively less attention, is political geography. This essay is directed toward cumulation, reflection, and integration with regard to political geography and the geopolitical linkages found in the study of international relations generally and international conflict in particular. In doing so, it will explicitly draw on the work of geographers and provide linkages between the disciplines of geography and political science.

This essay, then, has several interrelated themes within a broad discussion of political geography and cumulation. The most prominent is the linkage between geography and international conflict. It will be presented within several different contexts. First is the more general linkage between geography and international politics. However, to look at geography and international politics as well as geography and international conflict, we also need, second, to explicate more clearly a set of concepts that are related to geography and spatiality, including territory, territoriality, proximity and distance, and borders. These concepts help us understand the role and importance of spatiality and spatial perspectives and alert us to how the work of geographers can help us think about international conflict. And,

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third, the linkages between geography and international conflict will be made within the context of the opportunity and willingness framework of analysis.

### Cumulation and International Conflict

The broad mandate for assessing and possibly improving our knowledge and understanding of the geopolitical aspects of international conflict and international relations touches on a great variety of topics and could lead to an article of immense proportions. Instead, this essay will comment on several broad approaches to the study of geopolitics and international conflict and ways in which to tie studies of the geography of conflict together as well as present some observations on what would be productive methods for the study of spatial-geographic aspects of international conflict. It is hoped that through such an exercise the odds of generating cumulation—especially Dina Zinnes' (1976) idea of “integrative cumulation” or Bruce Bueno de Mesquita's (1989; see also Symposium 1985) focus on “progress” in a Lakatosian sense—will be greatly improved. As noted in Benjamin Most and Harvey Starr (1989:7), for Zinnes, “additive cumulation occurs when ‘one study adds some information to the existing literatures on the subject,’ through such activities as the citation of previous findings, using previously collected data, secondary or reanalysis of existing data, the incorporation of new cases or new variables into the analysis, or expanding the application of models, indices or techniques to new cases or research questions.” Integrative cumulation goes further, reflecting instances in which earlier studies are “‘crucial’ to the conceptual and theoretical components of the subsequent study’s research design.” Additive cumulation should not be slighted, however, in that it is an indispensable part of the process that leads to integrative cumulation.

Territoriality, proximity, and spatiality have all played central roles in the study of international conflict. The place of territory in the analysis of conflict and the study of the diffusion of conflict are two areas in which there has been considerable “additive cumulation.” This is especially true regarding the use of border data sets such as the extensive and detailed data set compiled by the Correlates of War project (whose homepage is now located at Pennsylvania State University at <http://cow2.la.psu.edu/>). Additive cumulation is also found in the widespread use of contiguity as an independent or control variable in the study of conflict across different units of analysis (monadic, dyadic, and regional analyses), different time periods, and for different types of conflict (for example, war only or events lower on the escalatory ladder as tapped by the Militarized Interstate Dispute or MID data). The concept of “nice laws” (see Most and Starr 1989)—or domain specific laws—suggests that we should be concerned with under what conditions certain theories hold. In doing so, activities like those noted above, which indicate additive cumulation, become important and useful in specifying theory.

Given the extensive set of factors in the area of political geography that have led to additive cumulation, it is important to note that examination of the place of territory in the analysis of conflict and the study of the diffusion of conflict have also demonstrated a growing “integrative cumulation.”<sup>2</sup> The argument for cumulation in these areas (*contra* Simowitz 1998) has been presented in a set of overview works on the role of territory (which will be discussed below) and of diffusion studies (for example, see Most, Starr, and Siverson 1989). Indeed, except for the research program on the democratic peace (see Russett and Starr 2000), few other areas

<sup>2</sup>In lieu of an extensive discussion of cumulation and its role in the research programs of international relations scholars, readers are directed to Zinnes' (1976) seminal chapter. See also Most and Starr (1989: chapter 1) as well as Starr (2002a, c) for further discussions of cumulation as it relates to the research triad of theory, logic, and research design in general. See Most, Starr, and Siverson (1989), Starr and Siverson (1998), as well as Kristian Gleditsch (2002) for discussions of cumulation as it applies specifically to the diffusion of conflict.

in the study of conflict have developed such consistent, complementary, and reinforcing sets of empirical findings (see, for example, Hammarstrom and Heldt 2002). As noted, variables representing proximity or the issue of territory are routinely included in analyses as standard components, either as controls or as specific independent or intervening variables. In effect, contiguity has become a standard component of models since its inclusion as one of the handful of factors in Stuart Bremer's (1992) famous identification of "dangerous dyads." How territory, proximity, and spatiality have promoted integrative cumulation in the study of international conflict will be addressed in the remainder of this essay.

### Spatiality and International Conflict

But first, key concepts need to be explicated. Students of international relations have developed unusually coherent and useful overviews of theoretical and empirical work that relate the study of international politics and conflict to geography, territory and territoriality, distance, space, and spatiality. Even though the overarching idea that holds all of these works together is that of the "spatiality" of phenomena, overviews of spatiality by scholars who are not geographers have appeared only relatively recently. The author (Starr 2001a, 2003) has begun such a process by reviewing the thinking about space and spatiality by geographers to help political scientists in understanding why the spatial or locational contexts of behaviors need to be included in our studies along with the temporal contexts.<sup>3</sup> In doing so, it became clear that we need to understand more fully the differences between such concepts as "space," "location," and "distance."

Let us begin by drawing upon approaches to the idea of "place" by geographers (for example, Agnew and Duncan 1989):

The first approach—*space*—is the one with which . . . students of conflict are most familiar, emphasizing the *location of things* in relationship to other things, and how things are *distributed*. This idea of spatial contingency is picked up in Kirby and Ward's (1987:3) definition of "spatiality" as "a contingent factor within the operation of any social formation," in which society's "components are themselves dependent upon their spatial setting" (see also O'Loughlin and Anselin 1992:12). . . . This view of spatiality or location matches the two basic ways to think about location, as presented by Abler, Adams, and Gould in their classic text, *Spatial Organization* (1971:59)—"absolute location" and "relative location." According to Abler et al., "absolute location is position in relation to a conventional grid system designed solely for locative purposes." In this view, location is provided by such things as latitude and longitude or a street address. The concept becomes much more rich and trickier in the second way to think about location: "Relative location is position with respect to other locations." This can be expressed in terms of distance or travel times from other locations, the cost of such travel, etc. Thus . . . technology changes "relative location"—places that were once weeks apart in time are now only hours apart—and other mechanisms, such as alliances, can do likewise (Starr 2003:5, emphasis added).

As can be seen, with spatiality we are confronted with the question of "distance"—how close or far units are within some concept of space. Abler, Adams, and Gould (1971:72) have noted that prior to 1950 geographers most often dealt with space (and distance) in the "absolute" mode. Generally since then, in most research "relative location and relative distance [have] been used to define new kinds of stretchable, shrinkable spaces." They (Abler, Adams, and Gould 1971:82) go on to

<sup>3</sup>For other approaches to spatial issues, see the work of geographers such as John O'Loughlin and Luc Anselin (1991, 1992), the 2002 special issue of *Political Geography* edited by Michael Ward as well as work on related concepts such as "landscapes" (see Axelrod and Bennett 1993). An especially useful piece on geospatial ontology is that by Antony Galton (2001).

observe that “human decisions constantly alter and restructure relative spaces. It has taken geographers a long time to challenge the pervasive tyranny of absolute space.” Not only do human decisions “alter” relative spaces, various types of relative space explicitly take “time” into account, so that relative space and relative distance (and the meaning of relative space or distance) are heavily dependent on perceptions. As Abler, Adams, and Gould (1971:75) argue, “the spaces in which people live are much more psychological than absolute.”

The concept of relative distance thus complicates the question of how close or far things are from one another. This is a classic question, raised by many students of conflict, including in Kenneth Boulding’s (1962) seminal notion of the loss-of-strength gradient (LSG), which has been used in many subsequent studies (for example, Bueno de Mesquita 1981; Lemke 1995). In setting out the necessary elements of a conflict, Boulding discussed the need for at least two “parties” and important characteristics of these parties. One was the general principle “that each party can be supposed to be at his maximum power at home . . . but that his competitive power, in the sense of his ability to dominate another, declines the farther from home he operates. This is the great principle of *the further the weaker*” (Boulding 1962:78–79, emphasis in original). The loss-of-strength gradient is the amount of competitive power that is lost per some unit of distance from home. Here, relative distance is measured, not through some absolute distance, but a metric in the decline of power.

The question of “distance” was also raised by Quincy Wright (1942). In his massive work searching for the causes of war, Wright (1942:1240) hypothesized that the greater the “distance” between states, the greater the probability of war—“when powers are so isolated from one another that there is no basis for mutual understanding.” He attempted to measure distance through the many forms of physical and psychological distances that exist between social units—technological and strategic, intellectual and legal, social and political, psychic and expectancy, and policy distances. A similar notion of distance was also the basis of Bruce Russett’s (1967) study of international “regions,” in which he clustered states in terms of their distances on variables such as trade, UN voting, religion, and culture. Two recent reviews of ways to think about and measure distance are those by Gleditsch and Ward (2001) and Alan Henrikson (2002). Whereas Henrikson reviews gravity models of distance along with topological and attributional models of distance (such as those used by Wright and Russett), Gleditsch and Ward (2001:744) present a way to go beyond the either/or measurement of contiguity and reconceptualize distance by “measuring the shortest distance between the two closest physical locations” for any pair of states.

Returning to the issue of integrative cumulation and how theory develops, it can be argued that students of international relations have been concerned with distance for two broad theoretical and conceptual reasons. Conveniently, these two reasons can be summarized as “opportunity” and “willingness.” First, distance is important because states (or any other social units) that are close to each other, that is, are in proximity to one another, are better able to interact. Simply, they have the possibility or opportunity of interacting with one another. This is the “interaction opportunity” argument or approach to be discussed below. It derives directly from the work of Harold and Margaret Sprout on “environmental possibilism” (see Starr 1978; Most and Starr 1989: chap. 2). The Sprouts were concerned with what they called the “ecological triad,” which is composed of three elements: (1) an actor, or entity, of some sort, (2) an environment that surrounds the entity, and (3) the entity-environment relationship. In searching for alternatives to older geopolitical models of determinism—in which, by definition, decision makers are incapable of choice given the characteristics of the geographical environment or “milieu” (Sprout and Sprout 1969:44)—the Sprouts identified “environmental possibilism,” referring to the set of factors that limit human opportunities and constrain the type of action

that can be taken as well as the consequences of such action (Most and Starr 1989:27). The environment presents policymakers with a range of possibilities, which, according to the Sprouts, had to be discoverable by the decision-making entity.

Willingness refers to “the choice (and process of choice) that is related to the selection of some behavioral option from a range of alternatives. Willingness therefore refers to the willingness to choose (even if the choice is no action), and to employ available capabilities to further some policy option over others” (Most and Starr 1989:23). This concept is closely related to the Sprouts’ notion of “cognitive behaviorism,” another alternative to determinism in the study of the ecological triad: “the simple and familiar principle that a person reacts to his milieu as he apperceives it—that is, as he perceives and interprets it in light of past experience” (Sprout and Sprout 1969:45). Thus, the second reason why we should be concerned with distance is because states (or any other social units) that are close to each other are also perceived as important or salient to each other. This is so for a combination of reasons. Greater perceptions of threat or gain, or of interdependence, are ways in which proximity can generate salience. States (or whatever unit is under consideration) that are close are seen as more important. Such views affect willingness through the expected utility calculations of policymakers. Willingness to interact and to manage subsequent conflicts in different ways, for example, will depend on the importance or salience of an issue or an opponent.

Thus, proximity makes states (or other social units) that are close to one another “relevant” to one another through some combination of both opportunity and willingness. High levels of opportunity and willingness—generated, for instance, by long contiguous borders that go through areas with valuable resources, important strategic features, and on both sides of which live members of the same ethnic group—mean that two states are both easily able to interact with each other and both perceive the other as important and relevant (whether as a possible opponent or cooperator through shared interests).

This presentation becomes more important if we look at the way many research designs to study international conflict are constructed. Students of international conflict have structured research designs to include only “relevant” dyads—pairs of states that are able to interact with one another, highly likely to interact with one another, or perceive important stakes involved in that interaction (for example, Lemke 1995; Leeds and Davis 1999; Lemke and Reed 2001). They have developed studies based on states within politically relevant areas or neighborhoods (see, for example, Maoz’s “politically relevant international environment” or PRIE, 1996; Enterline 1998; Murdoch and Sandler 2002). New work on “network” analyses of various kinds (for instance, Maoz 2001, 2002; Gleditsch’s 2002 “connectivity matrix” analysis; Hammarstrom and Heldt 2002) extends the concept and utility of actors who are “relevant” to each other through spatial or behavioral proximity. As Mats Hammarstrom and Birger Heldt (2002:358) explain, “the term ‘network’ refers to a set of units of some kind and the ‘ties’ (relations) of specific types that occur among them.” Not only can such ties or relations be represented spatially, but they are often dependent on the actual spatial arrangement of the social units. For example, using “network position,” Hammarstrom and Heldt (2002) support previous findings on the diffusion of conflict among contiguous states, but they also argue that the network position approach allows them to identify *which* contiguous states are most likely to be the sites of diffusion.

#### *Now Add Territory*

There is an additional factor in the relationship between proximity and the stakes of interaction. If we are talking about states, we are talking about “territorial units.” States are proximate to one another in a spatial or geographic manner if their

territorial areas are near each other. How close or far are these territorial areas from each other in terms of absolute distance? Are they contiguous? That is, do the territories of two states “touch” each other? Do they “border” each other? If they do not actually touch each other, are they separated by rivers? If they do not actually touch each other, how far apart are they across some other body of water? Thus, borders represent the highest level of proximity—the touching of territory or, by dictionary definition, the condition of contiguity (see Starr and Most 1976; Gochman 1992 for conceptualizations of borders).

It should be clear that territory serves at least two distinct purposes in the study of international relations. First, by defining the territorial extent of political units, territory creates spatial arrangements among the units indicating the physical-geographic distance between those units. This “distance” is dynamic, in that the “time-distance” between the units changes with changing technologies of transportation and communication, with changes in the arrangements of the units through alliances, or with the merging of units through conquest or voluntary integration. As noted in Starr and Siverson (1990), alliances can act as “political technology” by changing not only the absolute distance between units, but their time-distance as well. State A, which does not have a contiguous border with State B, is now able to border State B through an alliance with State C, which is contiguous to B. This exact issue arose among NATO, Turkey, and Iraq prior to and immediately after the onset of the Second Gulf War, given the desire of the United States to reduce the loss-of-strength gradient of bringing military force to bear on Iraq. The conquest of territory can create new borders (as in the expansion of Russia or the United States across their respective continents or the Napoleonic expansion across Europe). The breakup of states or empires can create new borders—as in the post-Soviet Union or post-Yugoslavia situations or the redrawing of the world map after World War I with the dissolution of the Ottoman, Russian, and Austro-Hungarian empires. But borders were also altered with the reunification of Germany after the fall of the Berlin Wall and the dissolution of the Warsaw Pact. Voluntary integration, as seen in the progressive growth of the European Union (both geographically and functionally), can also change the legal, economic, and political nature and meaning of borders.

Second, as the place where people live, territory provides an important component of “group identity” and becomes endowed with extraordinary symbolic importance to people. There is a large and growing literature on identity and geography, particularly as generated by geographers concerned with the symbolic importance inherent in territory and the role such symbolism and identity plays in the daily lives of people as well as international politics (see, for example, Agnew and Duncan 1989; Agnew and Corbridge 1995; Newman 1999; Kliot and Newman 2000; Dodds 2001). In addition to value based on symbol and identity, territory may also provide real resource value to peoples (arable land; potable water; minerals of value such as gold, uranium, or oil; access to seas or rivers; and other features of militarily strategic value). So, as will be noted below, territory takes on value across many dimensions: territory is important to humans across all levels of social aggregation. It both becomes a source of conflict and raises the stakes of any conflict.

These broad ways in which territory becomes related to conflict—again through opportunity (ease of interaction) and willingness (importance or salience)—have been addressed by a number of scholars in literature reviews or as part of specific research projects. Indeed, a special issue of *International Interactions* and the follow-on edited volume (Ward 1992) contain a number of important articles linking distance-proximity and territory-territoriality to international conflict, including that by O’Loughlin and Anselin (1991), which argues how geographers need to help bring geographic elements back into the study of international relations. Perhaps the most influential of these pieces was by Paul Diehl (1991); it has served as the basis for subsequent reviews and empirical research with scholars building on

his broad categorization of the two basic ways territory becomes part of the international conflict process (to be discussed below).

This collection was soon followed by a book by Gary Goertz and Diehl (1992) on territorial change and conflict, significant sections of John Vasquez's (1993) *War Puzzle*, and Paul Huth's (1996) work on territorial disputes. A more recent collection on geopolitical and territorial studies was also edited by Diehl (1999; see especially Diehl's introductory chapter). An important review article on the relationship between territory and conflict, drawing on his own recent work and following on themes developed by Vasquez and Diehl, is found in Paul Hensel (2000).

### *The Geographic Context*

Territory is the most obvious way to highlight the importance of geography. But when we take space and spatiality, proximity and distance, and territory together, we are identifying the need that social relations be studied within a geographic or spatial context as well as a temporal context. Many of the literature reviews and edited volumes noted above deal with, and stress, the importance of the spatial context (see also Goertz 1992, 1994; Starr 2001a, 2003). The relevance of space, proximity-distance, and territory is evident in Goertz's (1992:301) definition of context: "factors that influence fundamental relationships and meanings." Goertz has also stressed the crucial ways in which context affects research design. Consider that the use of time series data and designs is becoming more standard and the use of time to delineate units of analysis (for example, "nation-year") is currently the norm. In these ways, despite some exceptions (the study of contiguity, for example), much research in international relations involves the temporal dimension or temporal context.

Even though there is no denying the significance of time and the temporal context in social science, analysts need to pay more explicit and extensive attention to the spatial elements, or the spatial contexts, of social phenomena. Why? It is becoming clearer that time and space are two of the primary ways in which we contextualize social behavior and interactions. Abler, Adams, and Gould (1971:10) succinctly indicate the importance of these two dimensions: "Time and space are obvious and immediate aspects of human existence. . . . Time and space are the fundamental contexts of all experience. . . . Experience must be located in time and space before we can begin to process it further. . . . Locating an event in the spatio-temporal continuum is our first step in ordering our experience of it." Although this argument is rather obvious, it is crucial to understanding why any form of cumulation needs to be built around space as well as time. And it is key to understanding that analyses structured solely (or almost entirely) around time are only telling us half of the story. The welcome appearance of studies linking the spatial context to international conflict (as well as the synthesizing literature reviews already noted) have gone a long way to helping us understand the "other half" of the story. Studies of the importance of territory and the effects of changes in territory on international conflict demonstrate how information about the territorial-spatial context is clearly needed to complement and fill out the temporal context found in studies, for example, of enduring rivalries (see the works of Diehl and Goertz—both together and separately—mentioned above; also see Vasquez 1996; Rasler and Thompson 2000).

### **Opportunity, Willingness, and Ordering Spatial-Geographic Effects**

We have already shown above how the opportunity and willingness framework can help represent the importance of distance as well as the effects of territory in international politics. We will now use opportunity and willingness to further explore how territory-geography is related to conflict. But in so doing, we will also

be returning to the initial development of opportunity and willingness as a way to help synthesize and bring order to large (and sometimes unwieldy) literatures (see Starr 1978).

Looking across the literature on territoriality, geography, and international conflict, several broad themes emerge. As with the general study of conflict, the concepts of opportunity and willingness can be useful in organizing literatures and making sense of disparate studies and approaches as well as can serve minimally as a pre-theoretic device for generating hypotheses, conceptualizing components of our theories or models, and searching for nonintuitive relationships (see Starr 1978; Most and Starr 1989; Cioffi-Revilla and Starr 1995). Although these ideas will be familiar to many readers (now used so frequently that many authors do not feel it necessary to supply citation or attribution), a further (although still brief) overview is in order.

Opportunity and willingness is a form of agent-structure model, initially created to deal with the ways in which “entities” are related to their environments. To go back to basics, interdependence is a quality of systems. Systems are composed of units of some kind and the interaction among them. In the simplest of terms, we must be concerned with each unit and how each unit adapts to its environment. This individual adaptation produces the patterns of interaction that characterize the system. The ecological triad of the Sprouts described above informs any agent-structure approach and helps us think about units and their environments.

The seemingly elemental construct of the ecological triad has served as the basis for the development of the opportunity and willingness framework. The ecological triad provides great utility in its ability to link the entity and the environment by helping us see how and why different environments constrain, limit, or enable what entities are able to do and what they are likely to do. As critics of deterministic geopolitical or environmental models, the Sprouts presented alternative forms of the entity–environment relationship. Three of these are particularly useful to our thinking; two of which were noted above. First is “environmental possibilism” in which the environment is seen as a set of constraints on what is actually possible for the entity to do in that particular environment. Second is “environmental probabilism” in which the environmental constraints and possibilities make certain behaviors more or less likely. Third is “cognitive behaviorism” in which the entity—as ultimately embodied by individual decision makers—is linked to the environment through the images of the environment that people hold. Ultimately, then, we are concerned with the possibilities and constraints that face decision makers (opportunity) and with the choices that they make in light of these possibilities and constraints (willingness). The various levels of analysis involved in the study of international relations are thus linked by thinking of a decision maker as an entity who must behave within the very complex environment that surrounds him or her. Each level of analysis used in the exploration of international politics and foreign policy (for example, idiosyncratic-psychological, role-organizational, governmental, societal, dyadic or relational, regional, systemic) describes one of the environments within which the decision maker must operate (see Gleditsch 2002 for an application of this framework to zones of regional clustering).

The environments in which decision-making entities operate provide opportunities, risks, and potential costs and benefits that constrain policymakers. How are all these elements captured by the concept of opportunity? The environment makes certain opportunities, and not others, possible. Here the environment is seen as a set of constraints on what is actually possible for the entity to do in that particular context. Goertz (1994) has elaborated on this notion in his discussion of context as “barrier.” Possibility includes two dimensions. First, the phenomenon must already exist somewhere in the world system. The phenomenon—be it nuclear weapons, telecommunications satellites, Protestantism, Marxism, railroads, or financial markets—must have been “invented” so that it is available as a possibility to at

least some actors in the system. The second dimension centers around the distribution of this possibility in the system. For example, nuclear weapons do exist; however, most states cannot “take advantage” of them because they have neither the wealth nor the expertise to produce their own. Though a possibility may exist, limits on resources affect the ability to make use of it.

To summarize, opportunity requires three related conditions: (1) an environment that permits interaction between states, (2) states that possess adequate resources to be capable of certain kinds of actions, and (3) decision makers, or human agents of some kind, who are aware of both the range of interactions and the extent of capabilities available to them. Opportunity is the possibility of interaction because of objective conditions that may be perceived in varying (more and less accurate) ways by decision makers.

Willingness is concerned with the motivations that lead people to avail themselves of opportunities. Willingness deals with the goals and motivations of decision makers and focuses on why decision makers choose one course over another. Willingness is therefore based on perceptions of the global scene and of domestic political conditions. It derives from calculations of the costs and benefits of alternative courses of action, based not only on objective factors but also on perceptions (for instance, of threat) and emotions (for instance, fear, insecurity, or desire for revenge). Willingness thus depends on choice and perception. A person reacts according to what she thinks she can do and what others expect her to do. Willingness involves all those factors that affect how decision makers see the world, process information about the world, and make choices.

Finally, it is important to understand that both opportunity and willingness are required for a given behavior to occur; they are jointly necessary conditions. Wishing for something to happen is not enough—the capabilities to act for its fulfillment must be available. Simply being able to do something does not mean it will happen unless you have the will to take action (see especially Cioffi-Revilla and Starr 1995).

#### *Geography as a Facilitating Condition*

Let us now return to the relationships between geography and conflict as well as territory and conflict. Recall that territory reflects the spatial location of states, including their proximity or distance from one another—with their contiguous borders representing the highest level of proximity. We have also indicated some of the reasons why proximity or distance and territory are important. We can return to these basic issues using Diehl’s (1991) seminal article assessing the work on geography and war (see also Goertz and Diehl 1992:chap. 1). This work is important because of the manner in which Diehl categorizes the literature. He breaks the empirical studies of geography and war into two groups: (1) “geography as a facilitating condition” for conflict, and (2) “geography as a source of conflict”—in Goertz and Diehl (1992), the word “geography” is replaced by “territory” but the arguments remain substantially the same. As noted above, here we are placing Diehl’s analysis into a broader framework by using opportunity and willingness to help indicate how the analyses of geography-territory and war reflect the same sorts of phenomena highlighted when applying opportunity and willingness to distance and territory.

The distinction that Diehl presented between “geography as a facilitating condition” for conflict and “geography as a source of conflict” has been influential in studies relating territory and geopolitical factors to conflict. For instance, Hensel (2000) speaks of territory as “context” (that is, as a facilitating condition) and as a “source” of conflict. Although Vasquez (1996) has provided three theoretical perspectives linking geography and conflict, they also reduce to Diehl’s two views. Vasquez’s “territoriality perspective” discusses geography as a source of conflict,

something that states fight over. His two other perspectives—“proximity perspective” and “interaction perspective”—fall under Diehl’s rubric of geography as a “facilitating condition.” Vasquez’s proximity perspective is about the ease with which states can reach each other militarily and the interaction perspective links closeness or proximity to the frequency of interaction.

The work of Starr and Most (1976) specifically looked at the importance of proximity, and how it was measured and represented by borders and territory. Their diffusion research project (Most and Starr 1980) moved to examine borders after concluding that the diffusion of certain phenomena was best studied by looking only at units that were “relevant” to one another. Such relevance could be indicated by geographical proximity. Proximity, in turn, could be operationalized through “borders,” which were viewed as important indicators of proximity because they exhibit important relationships with both the opportunity and willingness of state actors as conceptualized by Starr and Most (1976).

Indeed, one set of studies Diehl used to illustrate the category of “geography as a facilitating condition” for conflict is the combined work of Starr, Most, and Siverson (for example, Most and Starr 1980, 1989; Siverson and Starr 1991). In this research, Most and Starr develop the idea of “interaction opportunity” based on the work of Boulding as well as a number of geographers. Boulding’s (1962) LSG is based on the greater costs and the greater difficulties of operating militarily, the greater the distance the target is from a state’s home territory. Earlier, the geographer G. K. Zipf (1949) presented his “law of least effort,” which simply argued that units interact more with those that are closer to them and less with those farther away. In Most and Starr’s terms, the closer units such as states are to one another, the greater their possibility for interaction.

The opportunity for interaction concept was elaborated by Siverson and Starr (1991). They conceptualized proximity, as measured by borders and contiguity, as a factor of “loose necessity.” That is, proximity creates the possibility for conflict through increased possibilities for interaction (both positive and negative); thus, it raises the probability of interactions, both positive and negative. They stress the basic idea that the interaction opportunity model only holds that closer units will interact more.

However, many (if not most) scholars have assumed that greater interaction leads to more conflict and, in turn, their studies have been designed to apply the interaction opportunity idea to conflict rather than cooperative behavior. Such an approach is clearly a misunderstanding of possibilism as well as opportunity. The geographer Zipf’s (1949) “law of least effort” applies to interactions in general, positive as well as negative. Diehl (1991) understood this distinction, noting that conflict was not the “necessary” effect of having an interaction opportunity through contiguity—meaning that proximity of territory only increases the probability of conflictual interaction but does not ensure it will happen.

Likewise, Siverson and Starr (1991) found that borders (as well as alliances) only increase the probability that ongoing wars will diffuse to “warring border nations,” not that they necessarily will do so. Similar results abound. For example, Maoz and Russett (1992:260) have observed that even though contiguity is a strong factor in predicting dyadic conflict, “it does not account for the relative lack of conflict between democratic states.” And, of course, none of the arguments for the interaction opportunity apply *only* to territorially proximate homelands. Starr and Most (1976) raise the issue that territorially proximate possessions of states will have the same effects. In addition, the interaction opportunity argument (based on the Loss of Strength Gradient) also recognizes that “great” or “major” powers are so named because they possess a greater ability to interact with states far from their homelands. These states can project military power globally so that their interaction opportunities have transcended first-order territorial contiguity (see, for example, Morton and Starr 2001 for a discussion of “elite

powers” that combine large land armies with large navies or strategic bombers and missiles).

Indeed, recent studies have shown that high interaction opportunities may lead to more cooperative behavior as well as conflictual behavior. Starr and Thomas (2002a, 2002b, 2005) have found that high levels of ease of interaction across borders—greater interaction opportunities—are also related to positive Deutschian interdependence-integration effects. They argue (Starr and Thomas 2005) that simply categorizing two states as being contiguous may not adequately reflect expected underlying behavior. And they present two different views on the relationship between contiguity and conflict: (1) interaction opportunity, which is hypothesized to make conflict more probable, and (2) Deutsch’s social communication model of integration, which contends that increased interactions, transactions, and interdependence make conflict less probable. Each view, however, represents a linear (positive or negative) relationship between ease of interaction and conflict. To deal with this problem, Starr and Thomas (2002b, 2005) propose a curvilinear relationship with the *low occurrence* of conflict at both the lowest and highest levels of ease of interaction (opportunity) and salience (willingness). Conflict is most likely when the expected utility of conflict is greatest—that is, in the middle, where states have *both* the opportunity and willingness to engage in conflict.

These observations stress the importance that those studying territory and proximity understand the arguments behind interaction opportunity and ease of interaction as a facilitating condition correctly. As a form of opportunity, the facilitating condition argument starts with the idea that it must be possible to interact, to have conflict, and to have militarized conflict. Proximity both creates such possibilities and raises their probabilities (and also raises the probability of cooperative interactions under the right circumstances). But, proximity is only one of a number of other potentially substitutable ways by which these possibilities occur! Most and Starr (1989) have observed that opportunity or willingness can operationally occur or be made available in a number of alternative, nonunique, and substitutable ways. Substitutability, then, refers to the existence of a set of alternative modes of response or “alternative modes of redundancy” (Cioffi-Revilla and Starr 1995:456–457) by which decision makers can deal with some situation. Again, proximity is just one of the substitutable modes to increase interaction opportunities. Any factor that affects the meaning of distance, especially time–distance, can become such a substitutable mechanism. Technology provides many such mechanisms. For example, possibilities for interaction with a power projection that is low in cost exist for states with long-range nuclear-armed missiles or aircraft carrier-based bombers.

As noted above, behavior cannot occur without both opportunity and willingness. Opportunity can be created by a number of “second-order substitutable mechanisms” (the terminology used by Cioffi-Revilla and Starr 1995). Spatial proximity (for example, through contiguity) is one such mechanism. Thus, geography or territoriality as a facilitating mechanism is not a contending model with geography–territory as a source of conflict. As the two models represent opportunity and willingness, both must be present. The facilitating condition makes conflict possible, increases its probability, but does not guarantee that it will occur.

### *Geography as a Source of Conflict*

The work on geography, territory, or the “territorial perspective”—in which territory acts as the cause, the source, or the stakes involved in conflict—is quite extensive. Diehl (1999: x) reviews the value or importance of territory or what he calls the tangible “intrinsic importance of territory” including such items as natural resources, control over populations, access to trade, and strategic value. More intangible or symbolic aspects of territory are also included such as its historic value and its relationship to the group identity–ethnicity of the people living on it. David

Newman (1999:14) sees territory as a “demographic container” that holds people, providing territorial symbolism to their identity, such that territory becomes an “exclusive entity” for a people. This view creates a powerful we–they or us–them divide regarding territory (see, for example, Henderson 1997) and is vital to models based on the cohesion of social groups (for an overview of social-psychological theories see Pruitt and Kim 2004). For instance, Cameron Thies (2001) has linked territory as an issue to the factor of national identity, discussing how this connection helps generate and maintain an enduring rivalry.

Given the variety of factors that give territory value, it is not surprising that territory serves as the origin of conflict. It does so through territorial claims (Hensel 2001), territorial changes (Kacowicz 1994), territorial disputes and their settlement (Huth 1996; Gibler and Vasquez 1998; Hassner and Hironaka 2002; Huth and Allee 2002; Sample 2002), and strategic concerns, among others. Huth (1996) has used territorial disputes to demonstrate how domestic factors interact with such disputes to modify realist geopolitical theories. An interesting twist on the strategic importance of territory is found in John Vanzo (1999), who is concerned with the configuration of borders, especially the notion of the “compactness” of states.

Arguments for, and reviews of, empirical findings regarding territory-geography as a source of conflict can be found in Kal Holsti (1991), Goertz and Diehl (1992), Vasquez (1993), Stephen Kocs (1995), Douglas Gibler (1996), Hensel (1996, 2000), and Huth (1996). One illustrative empirical study is that by Vasquez and Paul Senese (2003), which indicates that territorial claims increase the probability that a pair of states will engage in a militarized dispute (MID) and that such territorial MIDs, in turn, increase the probability of war. A review of the continuously updated set of contemporary armed conflicts by Peter Wallensteen and his colleagues in the *Journal of Peace Research* also reveals the extent to which territorial issues continue to underlie international conflict in the post-Cold war era: 134 of the 225 “armed conflicts” identified between 1946 and 2001 (or 60 percent) involved territory as the “incompatibility” in the conflict (see the data sets listed at [www.prio.no/page/preview/preview/9429/40484.html](http://www.prio.no/page/preview/preview/9429/40484.html)). Similarly, sixteen of the twenty-nine conflicts found in 2003, or 55 percent, were based around territorial incompatibilities (Eriksson and Wallensteen 2004).

Territory (or geography) as a source of conflict falls under both opportunity and willingness. Territory that connects, sits between, or is disputed by two states provides something to fight over. This is not simply a facilitating condition. Territory exists as a possible issue for conflict; it is available as a source of conflict or contention. Because of territory’s tangible and intangible value, it is something that people care about and are willing to fight over. Thus, territory is directly connected to willingness. People, groups, and states come into conflict every day during the course of normal social transactions and interactions: incompatibilities occur, representing incompatible claims of interests and preferences. Most such incompatibilities are managed simply through routine mechanisms or are ignored because they do not make claims to things that are highly valued. The research on territory and conflict indicates that territory is literally always of high value, salience, or importance to people and groups. Territory raises the stakes or value of conflict, thus raising the probability of escalation and lowering the probability of easy management. In other words, because territory is of such value, it increases the expected utility of fighting for it, even if the probability of success appears to be low.

Perhaps the study of protracted social conflicts best represents all of these points (see Azar 1984, 1985; Friedman 1999, 2002). In Gil Friedman’s (2002:11) terms, the typical protracted conflict situation finds the “geodemographic integration of rival nations,” that is, the intermingling of peoples from different ethnic-national groups on the same territory. This constant opportunity for conflict is also embedded within a context of constant willingness. The conflicting claims over the

ownership of the territory are claims representing the highest values for each group because the ownership of the territory is passionately attached to or embedded in group identity. The constant, and high, level of both opportunity and willingness is a significant factor in the “intractability” (Azar 1985) of protracted social conflicts.

It follows that the decision regarding conflict or escalation—willingness—is made more probable for issues involving territory because the value of territory contributes to the positive expected utility of choosing conflict or conflict escalation. Hensel (2000), for example, explicitly links territory to such expected utility considerations. This is a key reason why territory and contiguity are regularly used as independent, intervening, or control variables in models of international conflict. It is important to note that, just as with territory as a facilitating condition, the argument here is not that territory is the only, or even the most important, source of conflict across all situations or under all conditions (see, for example, Mitchell and Prins 1999 who demonstrate this observation while investigating the issues at stake in the study of militarized disputes). What the work of Diehl, Vasquez, Hensel, Huth, and others mentioned earlier, however, has shown is that territory is often the central issue at stake and should be included in the group of “usual suspects.”

The relationship between the value of territory and international conflict can also be explained by prospect theory (or, more specifically, the prospect theory variation of expected utility models; see, for example, Levy 2000). Prospect theory introduces the idea of “endowment effects,” in which, “because of loss aversion, people tend to value what they have more than comparable things that they do not have” (Levy 2000:195). The new acquisition of territory (because it is so highly valued) produces almost immediate endowment effects. Because of these endowment effects when a country takes territory, we find that *both* sides now frame the situation as one of losses. That is, the state that loses territory frames the situation as one of loss, becoming risk acceptant in terms of the escalation or pursuit of the conflict. And, in turn, the state that has newly acquired territory now claims the territory and also quickly frames any return of the territory in the realm of losses. Thus, both sides frame the situation as involving losses. In turn, both sides become risk acceptant with regard to the escalation or militarization of the conflict. Thus, there is increased willingness and an increased probability of escalation to militarized conflict.

### **Conclusion: An Agenda for Future Research**

In sum, political geography has clearly made contributions to the study of international conflict within the broader context of the study of international relations. Various geopolitical linkages have demonstrated the utility of thinking in terms of spatiality, distance and proximity, and territory. Students of international relations have drawn upon the work of geographers in this cumulative endeavor, but we have not gone far enough. One important aspect of a future agenda for the study of international politics and international conflict is to exploit more fully the ways geography can help us think about international phenomena and design research accordingly.

There are a number of new (and exciting) developments in geography that can inform the study of international conflict. These developments stem from theoretical and methodological work by geographers that parallels debates and advances in the study of international relations. Philosophically, geographers are paying greater attention to what “spatial reality” is, what it means, and the multiple ways in which scholars approach the geographic world. These are questions of geospatial ontology that are similar to those scholars of international relations would recognize as being raised by constructivist approaches to social scientific investigation, for example, the

work of Barry Smith (2001; Smith and Barzi 2000). Galton (2001:173) gets to the heart of the matter quickly and simply:

Everything I see on a map can be described as geographical information. It is obvious that such information comes in many different forms. Representing a town by placing a small circle at a specific location on the map is quite different from showing the extent of woodland by coloring areas of the map green. How should the different kinds of geographical information be classified? Can we divide them into a small number of basic kinds, or are we faced with a plethora of uniquely different sorts of information that resists any attempt at systematization? If we settle for a few basic kinds, how are these kinds related, and how should we decide which kind to use in any particular case?

What this quote tells us is that we must revisit our traditional measures of proximity or “distance,” recognizing explicitly the psychological aspects of place, distance, their meanings, and how those meanings can change. We need to extend political psychology to concerns that we might have previously called political geography, and vice versa. Thus, we must continue to stress that such meanings are *dynamic* and that geographic contexts are not immutable constant factors in our research. Such additional approaches can have a significant impact on studies of ethnic conflict (for example, Lake and Rothchild 1998) and especially on the study of protracted social conflict. In protracted social conflicts both sides usually have invested territory with great importance for the identity of the group, thereby making compromise over territorial adjustments difficult. Thus, one challenge will be not only to look at the presence or absence of contiguity (especially as a “control” variable; see Ray 2003), but how territory is viewed by leaders, populations, and relevant subsets of these populations. The spatial distribution and locations of such subsets of people should be examined as well.

We also need to pay explicit attention to geographically based or territorially oriented identities. Our research agenda must include ethnic-based (or national) identities that are commonly used (for example, as in Gurr’s 1993 research on endangered minorities). We presently have studies of territorial claims, territorial transfers, and territorial conflict. Although any study of international conflict needs to be concerned with how territory might be involved in the stakes or causes of conflict, territory also needs to be factored explicitly into studies that use ethnic or communal identity as variables.

At the same time, as briefly outlined in Starr (2001a, 2003), a number of methodological innovations are taking place in the study of the spatial context of political phenomena that have been developed by or borrowed from geographers. Such developments now allow students of international conflict to add spatially based analyses to our more standard time-based research designs. Indeed, one of the most important components of a future research agenda is the use of spatial statistics.

Anselin (1999:93) has noted three major ways in which the methodologies of spatial analysis contribute to the social scientist’s “toolbox.” The first deals with “data integration,” which involves “the conversion of data collected at one spatial scale (and time dimension) to other scales and dimensions.” This need has generated the increased use of GIS or Geographic Information Systems across the social sciences and has been driven by the increased availability of spatial data produced by such systems. Anselin (1995:93) argues that GIS—with its ability to generate and analyze large datasets, along with its other organizational, modeling, and synthesizing attributes—has “created a demand for new techniques for spatial data analysis of both an exploratory and a confirmatory nature.” In part based on the nature and power of GIS, a second important contribution involves “exploratory spatial data analysis (ESDA) and visualization in an inductive approach to discovering patterns, eliciting hypotheses, and suggesting associations” (Anselin

1999:68). A third important contribution focuses on the use of deductive approaches to analyze the spatial context, specifically the use of the specialized methodology of spatial statistics and spatial econometrics. An overview is provided by Michael Goodchild et al. (2000:148):

Principles of statistics in a spatial context are contained in spatial statistics, geostatistics, and spatial econometrics and based on the concept of a spatial random field. They incorporate models of spatial dependence and spatial heterogeneity, allowing for specification testing, estimation, and prediction of spatial phenomena observed as points, continuous surfaces, or lattices (regions). Spatial data analysis tools therefore permit exploration of data from a spatial perspective, looking for spatial patterns, correlations, outliers, and residuals and submitting apparent patterns to rigorous statistical tests. They also permit the confirmatory testing of nonspatial hypotheses using spatial data.

Political geography, then, also provides the possibility for a variety of new data sets for the study of international phenomena. Looking at space as well as various subdivisions of that space is one strategy by which to increase the number of observations in what have previously been small-*N* studies (for example, see Collier 1993). GIS have also generated a large amount of new data about the world and how it is organized. Part of our agenda is to identify such data and make use of it. Another part of the agenda is to design new GIS-based studies to develop data sets that would have been unavailable without GIS technology.

One simple definition of what a geographic information system includes is provided by geographer Jack Dangermond (1992:11–12): “a GIS is an organized collection of computer hardware, software, and geographic data designed to efficiently capture, store, update, manipulate, analyze, and display all forms of geographically referenced information.” It is important to understand that a GIS is a tool founded on a variety of computer technologies that permits the handling of data concerned with the location—or, more broadly, the spatiality—of physical phenomena and human artifacts. A GIS permits the integration of data about the spatiality of phenomena along with data about other characteristics of those phenomena. More technically (Dangermond 1992:12):

GISs can store geographically referenced (cartographic or spatial) data in a raster (grid or cellular-based) data structure or in an *x,y* coordinate reference-based (vector) data structure as points (nodes), lines (arcs), and polygons (bounded by arcs, inclosing an area). . . . GISs make use of a variety of coordinate referencing systems to locate features on the earth relative to others; these coordinate systems, in turn, make use of a variety of map projections to transform earth references onto a two-dimensional surface (the map).

It is important to see that GIS goes well beyond mere computer mapping. According to David Cowen (1990:57), the heart of a GIS system is its ability to overlay various layers or coverages of data and in the process to create “new information rather than just have retrieved previously encoded information.” To do so, a GIS system must include the following four major components (Marble 1990:10):

- (1) A data input subsystem that collects or processes spatial data derived from existing maps, remote sensors, and so on;
- (2) A data storage and retrieval subsystem that organizes the spatial data in a form that permits it to be quickly retrieved by the user for subsequent analysis;
- (3) A data manipulation and analysis subsystem that performs a variety of tasks such as changing the form of the data through user-defined aggregation rules or producing estimates of parameters and constraints for various space-time organization or simulation models;

- (4) A data reporting subsystem that is capable of displaying all or part of the original database as well as manipulated data and the output from spatial models in tabular or map form.

More international relations scholars are taking advantage of the data and methods of geographic information systems. Such studies have been directed to both geography-territory as the source of conflict as well as geography-territory as facilitating conditions. As an example of the former, Paivi Lujala and Halvard Buhaug (2003) use a GIS to look at the spatial distribution of the assets of a territory in order to link them to the study of armed conflict. By using GIS, Lujala and Buhaug can do analyses at substate levels, disaggregate country-level data and analyses, and increase the number of units studied.

Currently, one of the more extensive uses of geographic information systems has been by the author (for example, Starr 2001b, 2002b; Starr and Thomas 2002a, 2005). GIS-generated data have permitted a reconceptualization of borders, along with a new approach to operationalizing opportunity and willingness (see Starr 2001a, 2002a for descriptions of the data set). Looking at GIS-generated indices for “ease of interaction” and “salience” that can apply to any single border or segment of any border, this project has revisited geography as a facilitating factor (opportunity as ease of interaction) and geography as a source of conflict (by looking at willingness to engage in conflict or cooperation through the importance or “salience” of any border area). The research findings of Starr and Thomas (2005) on the curvilinear relationship between contiguity and conflict noted above could not have been discovered (or studied!) using previously collected data on contiguity, in which contiguity was an “on-off” variable simply noting whether or not two states shared a land border. This research and its results were only possible with the type of data provided by GIS regarding the nature of borders. Thus, a future research agenda should include revisiting studies that have used the simple presence or absence of contiguity with data that now can detail the “nature” of specific borders or portions of those borders. For example, which types of borders are most or least related to spatial diffusion: those with high ease of interaction, high salience, or both (“vital borders”)? Is it simply “borderness” in the sense of contiguity, or closeness in miles or kilometers; or are there more specific qualities about the nature of the borders that are involved? Indeed, is it the nature of the border rather than the numbers of borders that affect conflict behavior? What sorts of borders can be found between states in enduring rivalries? What is the nature of the territory over which conflicts arise in terms of importance or salience and ease of interaction?

As Starr (2003:370) has observed: “Cumulation and ‘progress’ in the study of global phenomena will depend on the quality and rigor of our theories and our methods. Synthesis will follow broad agent-structure approaches that cut across more standard levels of analysis and disciplinary boundaries. The challenges facing researchers arise from finding the appropriate methods by which to study the agent-structure problem.” The challenges listed in Starr (2002a) include the questions of how to cut into the continuous feedback loops between agent and structure and between endogenous and exogenous factors, how to design studies of necessity, and how to craft the proper designs and methods to study substitutability. An additional challenge we face is to increase the relevance of the agent-structure problem (Starr 2003). For research on international conflict to meet the stringent criteria of integrative cumulation, we will also need to meet the challenge of how to study space and spatiality and the even more difficult challenge of combining spatial and temporal contexts, perspectives, and modes of analysis. This last challenge is both the motivation for the current essay and the main target of a future agenda for research.

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