

THE RELATIONSHIP BETWEEN REVOLUTION AND WAR:
A THEORETICAL OVERVIEW

Harvey Starr

Department of Government and
International Studies
University of South Carolina

Paper prepared for presentation at the Annual Meeting of the International
Studies Association, Vancouver, British Columbia, Canada, March 20-23, 1991.

INTRODUCTION: INVESTIGATING INTERNAL-EXTERNAL LINKAGES

As introduced in Starr (1990:1), "A not inconsiderable literature has been devoted to the complex question of the linkages/connections/causal structure between political phenomena occurring within the borders of nation-states and phenomena occurring beyond those borders." That paper began to outline the main elements of a project which seeks to investigate the overall relationship between internal and external policy through the use of models focusing on the choices of rational decision makers. This project seeks to develop models applicable to decision makers who must make choices coping with the domestic environment while simultaneously coping with the external environment, and vice versa. These models are, in addition, based on the assumption that choices in one arena have consequences, intended and unintended, on the other.'

The aim of this project, as set out in Starr (1990:2), is "to develop a 'logic' and a set of concepts which can link a variety of internal and external conditions to a similar variety of internal and external behaviors. While the overall concern is with the internal-external linkage in general, the more specific concern- and application- of this project is with the study of social conflict." After reviewing the logic of these models and why they are of use to students of social conflict, the current paper will use this theoretical context to look, explicitly, at the set of possible relationships between revolution and war.

The logic used derives from the work of Most and Starr (1989), which is based upon the opportunity and willingness framework, using that framework to develop the concepts of "substitutability and "nice laws." One of the central arguments of Most and Starr (1989:chap.5) is that researchers must understand the broader concepts and theoretical contexts within which their research sits. They argued that many of the shortcomings of middle-range (and narrower) research

was the failure to understand exactly what was being studied, and why: that researchers reified concepts without asking the key question "of what is this an instance?" (Rosenau, 1980). Many researchers also failed to engage the "so what?" question; failing to discuss why the concepts and questions under investigation were of importance to broader concerns and literatures.

The initial impetus to this project was a concern for the relationship between "great revolutions" and the hegemonic or system change wars which are central to the study of long cycles, the power transition, or the rise and decline of great powers. Both the shape of this relationship and the consequences of each form of conflict for the other were to be part of the research. However, following the arguments of Most and Starr, I found myself forced to confront broader issues regarding the more general relationship between revolution and war. This, in turn, could be seen as a subset of the relationship between internal collective violence and various forms of external violence.

It was clear that the overarching conceptual context was the conceptualization of the social conflict process, and that both types of conflict could be investigated through common processes and a common framework. Social conflict clearly provides the basis for this type of synthesis. For example, citing Coser, Oberschall (1978: 291) presents social conflict as "a struggle over values or claims to status, power and scarce resources, in which the aims of the conflict groups are not only to gain the desired value but also to neutralize, injure or eliminate rivals." Such a definition is clearly and easily applicable to both domestic and international conflict, (as elaborated in Starr, 1990: 3-4). It permits us to use a common framework where governmental decision makers face external challenge or internal opposition. It will allow us to put the processes by which governments deal with revolutionary opposition within the

context of international war, and to put the processes by which governments deal with external challenge within the context of internal collective violence, or revolution. Among others, Tilly (1985b) has clearly moved in this direction, noting his desire to look across levels of conflict (1985b:517-18), and to show that "over much of history international and domestic conflict have been not merely similar but overlapping, even indistinguishable phenomena" (1985b:522).

As will be developed at greater length below, the relationships set out by a common logic reflect a common concern of governmental decision makers with the "viability" of the government, from either internal or external threat, and how the government responds to that threat on the basis of general governmental "capacity" or resources. Social conflict, thus, has not only common processes, but is linked across levels by choices/calculations that affect conflict at both levels. The need to treat social conflict in just such an integrated fashion is consistent with the conclusion of Most and Starr, (1989:99):

If international behaviors can be alternative means that different states utilize in pursuit of their (perhaps heterogeneous) national goals and under at least certain conditions states may substitute one means for another, then all of the behaviors that tend to be studied in fragmented fashion need to be conceived and studied from the outset- not as separate and distinct phenomena, the understanding of which will eventually be integrated- but rather as commensurable behaviors of component parts of abstract conceptual puzzles.

In sum, the ultimate aim of the project will be to develop a model of the internal-external conflict nexus built upon a common logic, and applied to revolution/collective violence and war as each serves as an agent of change.

This project will be based upon a logic and a set of concepts which link internal and external conflict. The modeling of this linkage is based on four components of a common logic (see Most and Starr, 1989: chap.5):

- C_i , a state's (state i) defense capacity
- R_i , the external risks the state faces in the international system
- S_i the strength of the government in the face of domestic opposition
- T_i , the threat the government faces from domestic sources

Each of these components affects the perceptions that decision makers have of a state's viability, or security, and its capacity (resources) to defend itself against internal opposition or external threat. Viability is gauged on two levels: external risk (R) which may have economic as well as military or strategic components, and the internal threat to the viability of the government (T), which may have military, economic, or non-violent political dimensions. In order to respond to the demands placed on the government, or the political system of the state, the government requires resources. The overall capacity of the government to deal with such demands is reflected in C and S — the military/corecive, economic, and political resources it can bring to bear against external challenge or internal opposition.² We thus have a set of four concepts which are sufficiently abstract that they enable the investigator to recognize and avoid the worst effects of the substitutability problem, and yet are also "rich" in the sense that they overarch and embrace a number of concrete empirical factors which one can observe and measure.

As with the opportunity and willingness framework, the point to recognize is that it is possible to organize things under a common logic, and begin to integrate what we know. Thus, the model to be presented has utility as an

organizing structure, and as a way to synthesize our thinking about diverse phenomena. This organizing and integrating will begin with the five models or formulations presented in Most and Starr (1989: chap.5 Appendix). The first two of these models are based on unified actor assumptions, and are concerned with external viability (or the traditional meaning of security as presented by realism). The third and fourth models are unified actor formulations which deal with internal viability/security. The fifth model integrates all four to provide a model in which decision makers are posited as unified but in which they are allowed to pursue any one (or combination) of the objectives specified in the first four models.

The central axioms of relevance to the present paper are set out in Figure 1. Governmental goals are simply defined- to promote viability by maintaining (or increasing) OR and S>T; and/or to assure that the degree to which OR and S>T does not slip below the level attained at a previous period in time. This latter goal, presented in formulations 2 and 4 are based on arguments such as Lichbach's (1990:1060) discussion of "reference points", quoting Jon Elster's observation that people "assess options in terms of change from a reference point rather than in terms of an end state."

[Figures 1, 2 and 3 about here]

Figure 1 only begins to set out the logic of the relationships between viability and capacity, between C and S and R and T (see Starr 1990: 23-25 for a summary of the Most and Starr models; see Boulding 1962 for a fuller discussion of viability). A more complete review of the logic of the investigation is set out in Figure 2. Here, we see how C,R,S and T may help in thinking about, and establishing, the probabilities of war and revolution.

FIGURE 1
AXIOMS FROM MOST AND STARR'S FIVE FORMULATIONS

Axiom 3 from the five Most and Starr (1989: chap.5) formulations:

Formulation #1: A Unified Actor/National Security Dilemma

Axiom 3 The decision makers of an nth state are motivated or willing to establish the following inequality at time t:

$$C_n > R_n$$

Formulation #2: Unified Actor/Security Dilemma Ratio

Axiom 3b The decision makers of an nth state are motivated or willing to establish the following inequality at time t:

$$[C_n/R_n] \geq [C_{n-1}/R_{n-1}]$$

Formulation #3: Unified Actor/Governmental Stability

Axiom 3c The decision makers of an nth state are motivated or willing to establish the following inequality at time t:

$$S_n > T_n$$

Formulation #4: Unified Actor/Governmental Stability Ratio

Axiom 3d The decision makers of an nth state are motivated or willing to establish the following inequality at time t:

$$[S_n/T_n] \geq [S_{n-1}/T_{n-1}]$$

Formulation #5: National and Governmental Viability: An Integrated Formulation

Axiom 3 The decision makers of an nth state are motivated or willing to establish one or more of the four inequalities as set out above. Postulate 4 of Axiom 3 notes that if one or more of those inequalities are reversed, then the decision makers of the nth state will be motivated to adopt some policy which is designed to increase C_n , decrease R_n , increase S_n , and/or decrease T_n at t+1.

FIGURE 2
EXTERNAL AND INTERNAL CHOICE SETS

External Challenge

Internal Opposition

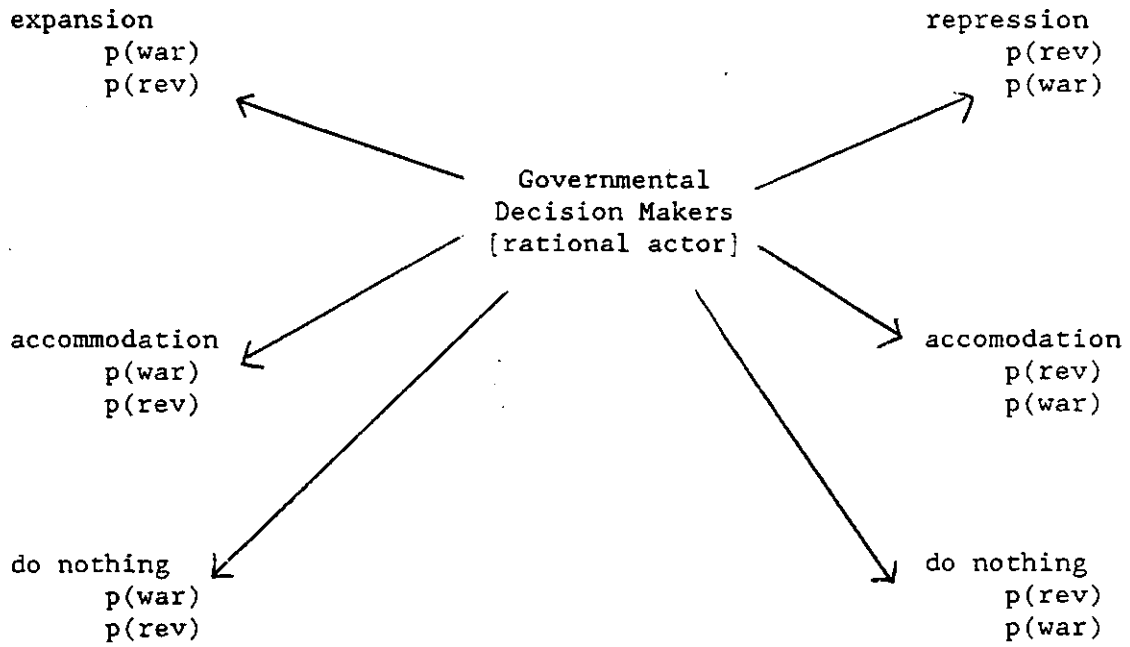


FIGURE 3
VIABILITY, CAPACITY AND THE SEARCH FOR RESOURCES

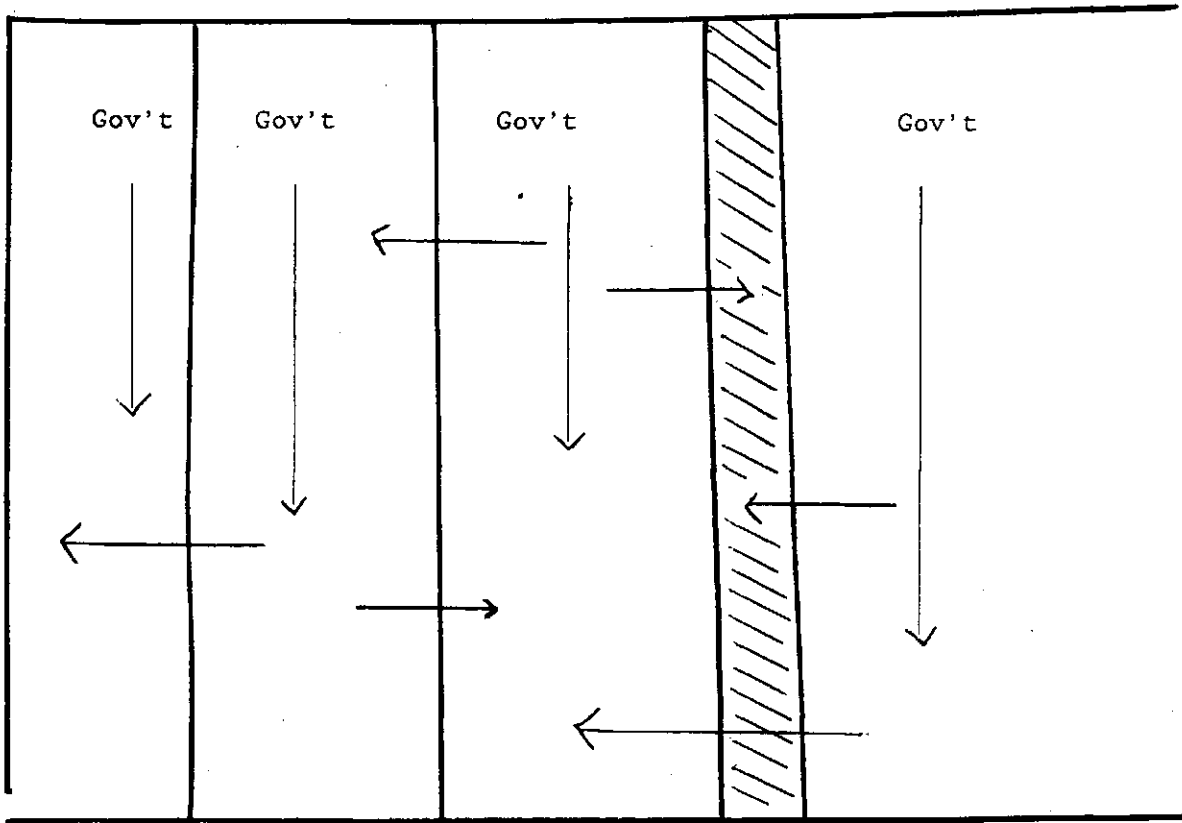


Figure 2 also makes clearer the relationships between war and revolution by looking at each as a function of the choices of decision makers.³

Figure 2 additionally makes clear that the approach I wish to develop here begins (but does not end!) with the perceptions and choices of governmental decision makers as rational actors; (rational choice as an approach to the study of social conflict is discussed at length in Starr, 1990). Putting the decision makers of governments at the nexus of internal and external policy is similar to the central concerns of Mastanduno, et. al. (1989:458), who note that "Because of its unique position at the intersection of the domestic and international political systems, we place the state at the center of our analysis."

The choices of decision makers are not limited to war or revolution, but to a set of choices regarding external and internal conflict: externally to war or peace regarding some other state, internally to repression or accommodation regarding domestic opposition groups. In Figure 2 the external choices have evolved into choices among policies of expansion, accommodation, or doing nothing. Each of these is associated with a probability of war or peace, and the probability of revolution given the war/peace outcome. There are parallel choices for domestic policy- repression, accommodation or doing nothing. Each of these choices is associated with the probability of either revolution or a non-violent resolution to some internal conflict, and the probability of war given the occurrence of revolution.

In this view C,R,S and T will be used to the develop an objective function and to develop the expected utility of war and revolution to the central decision makers. Some possible modeling strategies will be discussed at the conclusion of the paper. Here, I am simply concerned with indicating how C,R,S

and T help us think about external and internal conflict, and their possible relationships— which could be continuous or based on threshold effects.

These relationships take on a slightly different form in Figure 3, which pictures a finite system of resources. Each of the rectangles can be thought of as the domestic resource system of a state, the entire box as the resources of the global system. Note that the rectangles are of different sizes. Whether based on a Deutschian integration argument that for successful and continued integration resources are necessary to meet the demands of social integration, or on a Choucri and North lateral pressure argument that resources are necessary to meet the demands generated by the interaction of increasing population and advancing technology, or a combination of both (!)—governments find themselves in a constant quest for resources.

The search for resources is also, for example, a central focus of scholars investigating the basic processes in the development, rise, and expansion of the European state system (e.g. Tilly 1975, 1990; McNeill, 1982; Bull and Watson, 1984). Mastanduno, et. al. (1989:465), in presenting a realist theory of state action stress the relationship between state survival and the need for, and extraction of, resources. Whether governments are then to be seen as either "rent-seekers" or "predators" (e.g. see Wintrobe 1990, Lichbach 1984, McGinnis 1990), they are engaged in the acquisition of resources.

The downward arrows in Figure 3 indicate that governments may seek resources from within their societies. There are extensive references in the collective violence/revolution literature to the effects of extraction (and especially over-extraction) on the generation of anti-government resistance (see, for example, Finer, 1975). Many of the theories of collective violence and revolution are concerned with the legitimacy of governments, which rests on

(among other things) the degree of burdens or costs imposed on society, as well as its level of performance to meet societal needs.' Over extraction of resources can threaten this legitimacy, through perceptions of unfair or unequal extraction, or simply the burdens imposed. The basic process of extraction leading to over-extraction leading to resistance and then to revolution is noted below, and is one of the key processes linking revolution to war, if war causes unacceptable levels of extraction. War may also threaten legitimacy if it prevents governments from meeting societal needs, not through over extraction but through the re-allocation of extracted resources to war rather than societal problems.

The horizontal arrows in Figure 3 indicate that governments can also move into areas beyond their legal boundaries, seeking external resources. Sometimes these arrows go directly into the territory of other states. Sometimes the arrows move into shaded areas which do not "belong" to other states but over which they might compete (as in the African colony races of the nineteenth century).

The problem, as recognized and discussed by students of both revolution and international conflict (but usually not stated in these specific terms), is for governments to maximize the acquisition of resources under different conditions. They would wish to maximize the extraction of resources from within society, but minimize the costs in terms of internal opposition (and, hence, not to precipitate a revolution). Governments would also like to maximize the extraction of external resources, but minimize the costs of lateral pressure by avoiding, or managing, the intersections that lead to conflict and possibly war.

It is useful to point out that the logic being developed here indicates the central role played (explicitly or implicitly) by lateral pressure processes for all the theories of hegemonic war or system change war. The long cycle theories of Modelski and Thompson or Paul Kennedy, the hegemonic war models of Doran or Gilpin, or the power transition model of Organski and Kugler, are based on various processes that lead to differential rates in the growth of power among the major powers in the system. External extraction is central to this process, and makes clear that lateral pressure (and the intersections it produces) is a major mechanism for all these theories of hegemonic/system change war. As we will note below, significant factors in the differential growth of power include not only the ability of governments to extract resources domestically (central to the work of Organski and Kugler, 1981), but also the disruption and decline in power brought about by collective violence or revolution. This latter mechanism, which is central to this project, is not explicitly recognized or developed in the war literature.

It should also be remembered, however, that there will be upper limits to extraction whether internal or external. These are not just limits imposed by internal revolution, or external war. There are simply limits to the amount of resources available. This is particularly crucial to internal extraction. It may also mean that some states will never be viable in relation to other states no matter what level of internal resources are raised- that is, they will always be "conditionally viable" (see Boulding, 1962:chap.4). This would force the state to look outward, further supporting my concern with lateral pressure.'

Not indicated directly in Figure 3 is the relationship between internal and external resource seeking and conflict that is found at least in a preliminary stage in Figures 1 and 2. It is clear that if a state were to go

to war, the internal arrows would change— for example, more extraction would be sought; or a losing effort could prevent governments from meeting extraction needs or prevent them from meeting past levels of extraction. This, for example, reflects the heart of Skocpol's views of revolution (1979:13): "Indeed, a state's involvement in an international network of states is a basis for potential autonomy of action against groups and economic arrangements within its jurisdiction, even including the dominant class and existing relations of production" (emphasis added).

In a similar way, it is interesting to note that Rosecrance (1963) in his study of international systems stressed the role of elites within each of the nation-state units of the system— "was the elite satisfied with its position domestically or did it feel threatened by events in the international system?" (Dougherty and Pfaltzgraff, 1990:155). Dougherty and Pfaltzgraff also note that Rosecrance emphasized "the availability of disposable resources to the elite and its ability to mobilize them."

Revolution would similarly affect the external arrows; for example forcing states to pull back on external expansion as the internal situation became more precarious,⁶ or, alternatively leading to an external search for resources (arms, alliances, or taking of wealth) in order to deal with the internal situation. As an example of the latter, Mastanduno, et. al., discuss a wide range of possible relationships between external extraction and internal mobilization. One hypothesis they note (1989:466) is that, "As domestic political instability increases, the state will pursue external extraction and validation." In sum, Skocpol (1979:15) notes that "we must look not merely at the activities of social groups alone, but rather at the points of intersection between

international conditions and pressures, on the one hand, and class-structured economies and politically organized interests, on the other hand."

These comments only hint at the possible tradeoffs (both complex and simple) between the internal and external use of resources, and the strategies to acquire more resources that decision makers must consider. Governments seek to extract resources from society while in competition with other states; each takes place within the context of the other. The key point is that such tradeoffs exist, and must be taken into account by decision makers and analysts alike. In addition we are now alerted to another key component of the logic—that decision makers face two directions, they deal with what Putnam has called "two level games" or what Tsebelis discusses as "nested games."

NESTED GAMES: A TWO-LEVEL LOGIC

Internal and external phenomena are linked through the notion of choice and the consequences of choices. While I said that I start with the calculations of the decision makers of a state, their calculations will certainly be based on the behavior of their opponents, and third parties as well. With each choice that decision makers take, external challengers will have to recalculate the costs and benefits to them of going to war, or pursuing other strategies to further their own viability. With each choice that decision makers take, internal opponents will have to recalculate the probability that they can win at revolution; (a point stressed by Lichbach).

A final, but crucial set of calculations involve those that other states will make concerning the utility of war once state, becomes embroiled in revolution, and the calculations that internal groups make concerning the utility of revolution against the government of state, once it becomes involved

in external war. Thus, the concern with third parties means that the logic of the model must also include the effects of domestic conflict on both the timing and likelihood of external intervention. This is a central concern of Simon (1991, see especially chapter 1), who stresses that potential interveners must also have opportunity and willingness to intervene, and that internal conflict can certainly provide the opportunity as well as affect calculations of willingness.⁷ A more general position on the impact third parties might have on utility calculations is presented by Bueno de Mesquita (1983:356):

Indeed, third parties to a conflict are often in a strong position to alter the expected utility estimates of adversaries by shifting their policy positions toward or away from one or another potential belligerent. In so doing, third parties alter the multilateral component of the expected utility estimates either up or down, depending on the changes in their policies and the structure of the situation.

Thus, governmental decision makers must be concerned with domestic audiences and consequences as well as external audiences and consequences. They must recognize that consequences will occur at both levels even if their main concern is only at one of them. Tilly (1985b:522) summarizes this point by noting that "states face in two directions, toward other states and toward their own populations," and that "international conflicts commonly have strong repercussions on domestic conflicts and vice versa." Robert Putnam (1988:427) has addressed this phenomenon as the "logic of two-level games":

The politics of many international negotiations can be usefully conceived as a two-level game. At the national level, domestic groups pursue their interests by pressuring the government to adopt favorable policies, and politicians seek power by constructing coalitions among those groups. At the international level, national governments seek to maximize their own ability to satisfy domestic pressures, while minimizing the adverse consequences of foreign developments. Neither of the two games can be ignored by central decision-makers... Each national leader appears at both game boards... The unusual complexity of this two-level game is that moves that are rational for a player at one board (such as raising energy prices, conceding territory, or limiting auto imports) may be impolitic for that same player at the other board [emphasis added].

Additionally, Putnam notes eight significant linkages between domestic politics and diplomacy (1988:462). These include: "the possibility of synergistic issue linkage, in which strategic moves at one game-table facilitate unexpected coalitions at the second table," and "the paradoxical fact that institutional arrangements which strengthen decision-makers at home may weaken their international bargaining position, and vice versa."

Tsebelis (1990), in Nested Games is concerned with the appearance of irrationality in the choices of decision makers. That is, to an observer, people will make what seem to be suboptimal choices. Tsebelis argues that this occurs because decision makers play multiple games in multiple arenas:

Cases of apparently suboptimal choice are in fact cases of disagreement between the actor and the observer. Why would the actor and the observer disagree as to what the optimal course of action is? (1990:6-7)... The observer focuses attention on only one game, but the actor is involved in a whole network of games— what I call nested games... I refer to this case of nested games as games in multiple arenas... [where] any of the actor's moves has consequences in all arenas; an optimal alternative in one arena (or game) will not necessarily be optimal with respect to the entire network of arenas in which the actor is involved (1990:7-8).

One of Tsebelis' main points is that games are embedded within other games. He stresses (1990:245) that this is one way in which context (noted above) can be added to the analysis of decision. The relevance to this study is clear: "In games in multiple arenas, events or strategies in one arena influence the way the game is played in another arena" (1990:248).' Governments must face in both directions, as Tilly notes, and must play in the domestic and foreign arenas simultaneously.

While Tsebelis is interested in how the observer interprets the behavior of individuals making decisions within nested games, there is another dimension, highlighted by Putnam, and which needs to be reiterated: the individuals

involved in decision making may not fully understand how decisions made in respect to one arena will affect another. Individuals might be caught in a series of remedial moves from one arena to another as the feedback on the consequences of their actions occurs. The individual may indeed be caught off guard by the unintended consequences that cut across arenas. Kiser and Ostrom's (1982) discussion of Herbert Simon's models of the individual as "intendedly rational" may be interpreted as one way to look at nested games—and as to how well the individual, not the observer, understands the situation. In a discussion of how individual preferences and choices within society evolve and aggregate, Kuran (1988:24) summarizes this point nicely:

The crucial point is this. If individuals evaluated the issues p. and r through a single, internally consistent model, then their choice on one issue would not generate a surprise on the other. In fact, they use multiple models, which means that surprise is inevitable... The surprises are likely to be diagnosed incorrectly.'

THE LOGIC: A SUMMARY

If my previous work (in collaboration with Most and Siverson), and that of many other scholars concerned with cognitive science and decision making, has succeeded in convincing us of the importance of willingness (or choice), then scholars are faced with a difficult problem of research design—how do we know when decision makers are or are not willing? One solution, which has been employed in the rational choice and expected utility literature, is to begin to construct simple models of decision makers' goals and those conditions under which they would or would not be anxious to act. The procedure of specifying the contingent conditions under which certain expectations should hold is also in accord with the argument in favor of "nice laws" which flows logically from the consideration of substitutability (Most and Starr, 1989:chap.5) .¹⁹

The four components of the common logic generate four simple objectives with which we can begin to investigate the calculations of willingness. In Schelling's (1978) terms these are four "micro-motives," which if triggered, become the motors which drive decision processes. The four components indicate two types of "viability" considerations- external and internal. The decision process in some state, can be triggered by any combination of: decreases in C , increases in R_i , decreases in S_i , or increases in T , which are perceived by decision makers in state, to be of sufficient magnitude that one of the objective functions is flipped from its desired position. That result is sufficient to make decision makers "willing" to do "something" to (a) increase C , or decrease R_i (if one of the external conditions has been disrupted), or, (b) increase S_i , or decrease T_i , (if one of the internal conditions has been disrupted). It is here that the two-level or nested game formulation becomes important in that dealing with C or R will have important effects (intended and unintended) on S and T , and vice versa.

Just as a variety of different empirical factors can cause the disruption (alternative triggers), decision makers in principle have a variety of possible responses (substitution capability). What appears chaotic, unsystematic and perhaps random at the empirical level becomes coherent, commensurable and simple in the abstract. By putting the C - R relationship on the horizontal axis and S - T on the vertical (as in Figure 4 below), it is possible to create various structures which would indicate the tradeoffs between external and internal viability. That is, the choice of decision makers regarding the use of resources, and the effects that could be produced at each level, could be represented by a set of indifference curves. As Gilpin (1981:22) notes, "the slope of a state's indifference curve may shift in response to both internal and

external changes." More than that, tradeoffs are highlighted (Gilpin,1981:20): "Indifference analysis assumes that individuals have numerous objectives [here, both external and internal] and are willing to accept varying bundles of these objectives. In contrast to the idea of a hierarchy of goals... indifference analysis assumes individuals make trade-offs among these objectives and pursue 'satisficing' strategies rather than maximizing strategies... but will seek to find some optimum position on the set of indifference curves."

THE CONFLICT LITERATURE: LINKING WAR AND REVOLUTION

Some form of modeling is needed to deal with the potential complexity of the relationships and tradeoffs among C, R, S, and T. Simply taking each of the four components and matching them up against the other three for state i (for example, C_i 's relationship to R_i , T_i , and S_i), and taking each of the four components for state, and matching them up against each of the the four components for state i generates 28 possible relationships. While I have raised a number of important considerations for constructing models relating viability to capacity, threat to resources, and internal conflict to external conflict, we need more help in specifying which of the possible relationships is most central, or deserve the closest attention. As noted in Starr (1990), doing so will provide guidelines that will generate hypotheses for the construction of comparative case studies, for the specification of expected utility models, or for the comparative statics modeling of the relationships between C-R and S-T that will be outlined below.¹¹

The next sections of the paper will, therefore, set out a number of the revolution-to-war (rev>war) and war-to-revolution (war>rev) relationships that can be found either explicitly or implicitly in the literature on collective

violence and revolution, and from some of the literature on war. It should be noted here that despite my concern with specifying relationships more clearly, at this point (or, in this paper), I will still stay rather vague (sloppy?) about the concepts of "revolution" and "war." I will not review the various definitions or conceptualizations of revolution. It is obvious that Skocpol's concern with the "great" revolutions that fully change society and societal structure is not the same as studies of collective violence which indicate some level of organized domestic discontent, or "destructive attacks by groups within a political community against its regime, authorities, or policies" (Eckstein, 1980:137). There may be revolutions that do not meet the full system-change criteria used by Skocpol; and why men rebel is certainly a different question from when and how revolutions occur.¹³ While the definitions are different, the concern with internal opposition and desire for change will permit a review of propositions that link opposition and conflict over change to external conflict.

We may say the same about war. The hegemonic or system change wars that figure in the long cycles literature are different from wars that simply take place among major powers, wars in general, and certainly from smaller scale international conflicts among minor powers or the extra-systemic wars of nation-states against other actors (see, for example, the categories of wars developed by the Correlates of War project in Small and Singer, 1982). But they all involve the organized use of force, somatic violence which inflicts casualties and destroys property, and can be placed far to the conflict side of any conflict-cooperation continuum; (see Most and Starr, 1989:chap.4).

Revolution to War

Let us begin with the revolution-to-war relationship. The literature on collective violence or revolution is useful because it helps us to understand and conceptualize S and T (especially T), how they affect each other, and the relationships between them.¹³ The S-T relationship will affect the calculations of opportunity and willingness of the governmental decision makers of state, regarding the initiation of war against state, but also affect similar calculations in state which would make state, a target of external attack. Thus, two basic relationships emerge— in what ways revolution would lead a state to attack another, or in what ways revolution would make a state an attractive target for another state. Note that this latter possibility indicates the relevance of the whole literature on intervention, which will not, however, be extensively reviewed here.

A number of writers provide some variation of the rev>war relationship that revolution weakens the state and government in some way, making the state a target for other states, thus leading to war. Ward and Widmaier (1982), for example, present a formulation which very specifically leads from domestic conflict, to "social weakness" to a target that "invites" intervention. One of three possible routes of rev>war set out by Halliday (1990) is that revolution weakens states (and thus leads to war from outside intervention). Goldstone (1986) indicates that this happens because elite opponents cripple the government. Kick (1983) notes that the relationship differs when looking at the core or the periphery. Internal violence or civil war in peripheral countries leads to military interventions (war) by the core states.

Weakness is not the only way in which revolution might make a state a target for war. Adelman (1985) notes that revolution can pose a threat thereby "provoking" other states to intervene militarily by "introducing new political

ideals and principles of legitimacy." That is, revolutions cause disturbances that other states fear will diffuse, so, as in the Russian intervention or the Napoleonic wars, the revolutionary state becomes a target. Maoz (1989) notes the same process of revolution generating fear among other states. Adelman also discusses a revolution to counter-revolution sequence which invites intervention- either to take advantage of weakness, or to support the counter-revolutionaries.

A number of writers develop the links between revolution in state, and the initiation of war by state. One theme that emerges deals with revolutions providing new strength and vigor to states which then strive to export the revolution. Adelman (1985) develops a detailed model by which revolution leads to the creation of "new revolutionary armies" which provide the opportunity for the initiation of war. Revolution sweeps away the old military organizations and structures, creates new bureaucracies, provides new ideologies, (see also Brinton, 1965:240). These processes, in sum, permit a deeper mobilization of resources to create more formidable military forces (opportunity) permitting war initiation- for either the extraction of more resources, to spread the revolution, or to "protect" the revolution in a preemptive manner. Variations on this initiatory argument, that revolution provides the basis for new resources or strength and/or a revolutionary zeal, can be found in, among others, Goldstone (1986), Maoz (1989), Skocpol (1988), Gurr (1988), Halliday (1990).

The above models were based on successful revolutions. Zartman (1990) provides one example of how ongoing, and not necessarily successful, revolution can lead to the initiation of external war by the government. If revolutionary or rebellious forces seek sanctuary in neighboring "host" countries (as was the

case in many post-World War II communist insurgencies), one way the government can make such hosting costly, is to initiate violent conflict.

The fact that revolution weakens the state can also be used as an explanation of war through initiation (rather than as target). For example, the argument that revolution lowers the ability to extract resources from society, thus sending governments on an external search for resources that could lead to war through initiation may be found in Goldstone (1986) and Wintrobe (1990). The failure to extract enough resources from society because of internal conflict can lead to external/lateral pressure-type searches, intersections, and war. Resources may be sought to fight against the revolution, to appease internal opposition to stop (or prevent) revolution (accommodation, as noted in Figure 2), or to satisfy society after a revolution has been won.

The initiation of war by governments weakened or threatened by domestic conflict is also the central feature of the "diversionary" theory of war (e.g. see Levy, 1989 for a general review), or theories based on the conflict-cohesion hypothesis (e.g. see Coser, 1956; Stein, 1976). Here, war is used as a means to divert populations from collective violence, domestic grievances, and the like - to re-focus energy from internal conflict to an external enemy, and promote cohesion through the need to pull together in order to defeat an external enemy.

Perhaps the most comprehensive way to view rev>war, and as a way to lead into war>rev, is to conceptualize domestic collective violence or revolution as agents of change. Sorokin (1957:596-98) provides such a broad conceptualization when he sets up the following process: change leads to disorganization within systems, thereby disturbing order, and thus leading to violent conflict. The key here is change. Revolution by definition is an agent of change, promoting disorder. Disorder can weaken the state and make it a target. Disorder can lead

to revolutionary violence which may strengthen the state in the ways noted above, and lead to the initiation of violence.

In either of these possibilities, however, revolution is related to changes in power— the differential rates in the growth of power discussed above. Depending on whether one stresses the critical interval in the power cycle as proposed by Doran (1989), the power transition as proposed by Organski and Kugler (1981; Kugler and Organski, 1989), or the process by which systemic challengers approach or move away from the point where their expected-utility of challenging the hegemon is greatest (Gilpin, 1981)— revolution will lead to war through states initiation or through an attack on state,. Let me repeat again that the writers on systemic war fail to incorporate the effects of revolutions in their models.

Sorokin links change to the disturbance of order to violence. Along with the writers who propose that revolution will "provoke" attack through fear of diffusion by the governments of status quo powers, Sorokin sets out a model similar to the logic of diffusion developed by Most and Starr (see Most and Starr, 1980; Most, et. al., 1989). The Most and Starr studies actually centered on the diffusion of organized, violent conflict (not "war" per se). The model that was developed proposed that positive spatial diffusion would be enhanced by the presence of violent conflict (either civil war, large scale collective violence, or interstate war) in neighboring states (e.g. state.) .

Basing the logic on earlier work by Midlarsky and Boulding, Most and Starr argued that the presence of organized violence in a bordering country such as state, is highly salient to its neighbors. This salience derives from a newly heightened uncertainty in the neighboring states as to the changing policies of a new government in state., possible ideological change and its interaction with

either a newly strengthened or weakened government and state. This salience also derives from a newly heightened uncertainty in the neighboring states as to their own viability or state's viability. The concern for viability derived from questions about comparative resources, as state_n could either be increasing its strength as it mobilizes for interstate war, or rejuvenating itself through the process of revolution. Similarly, state_n might be decreasing in strength if it were losing an interstate war, or being sapped by large scale internal violence. Thus, the neighbor must discern whether it has a newly strengthened or weakened country on its borders. In this way the study of war diffusion, or the diffusion of violent conflict, is highly relevant to both the war>rev and war>rev relationships, (and to both the target and initiator variants).

Along with the salience produced by proximity, the Most and Starr diffusion logic is clearly concerned with the differential growth or diminution of power. The calculations of decision makers as to who was a weakened target, and/or whether newly mobilized resources made an attack possible, likely to succeed, and worth the effort depended on whether or not a country or its neighbors were engaged in violent conflict, whether that conflict was revolution or war, and whether or not they were being successful.

War to Revolution

The discussion of change and the use of diffusion to look at the spread of violent conflict leads naturally to various theories or models of the war>rev relationship. A complete statement of this relationship would require a detailed model, or at least an in-depth discussion, of why revolutions occur. I do not intend to engage in that exercise here, but direct the reader to such

broad surveys of the revolution literature as Aya (1979), Goldstone (1986), Rule (1988), and various articles in Gurr (1980).

As reviewed in such work, however, several broad categories of causality emerge. One broad category is based on the emergence of discontent among people or groups within society. Different theories propose different reasons why discontent arises (e.g. psychologically based processes such as relative deprivation) and the mechanisms by which discontent is translated into collective action against the government. A second broad category deals with resource mobilization— how opposition groups (no matter why or how they are discontented) mobilize the resources necessary to challenge the government's resources and win. Again, there are a number of different conceptions of "resources," from discussions of individual decisions to oppose the government and the numbers of people joining one side or the other, to discussions of group decisions and coalition formation, to comparisons of wealth or military capability, to questions of how governmental weakness occurs and stimulates opposition. As noted in Starr (1990) these two categories of theories of revolution, psychologically based deprivation-grievance models and resource mobilization models, can be subsumed under willingness and opportunity, respectively.

War is frequently investigated (again, explicitly or implicitly) as an agent of change, a factor in the growth of discontent, a factor in the weakening of governmental strength, and a factor in the changing resource base of opposition groups. Whether a war is won or lost also must be factored into the war>rev relationship. Tilly (1985b:527) provides an example of the relationship that lost wars lead to revolution, noting that there is "a concentration of revolutionary movements around the ends of wars, especially within states that

have lost wars." Adelman (1985:3) notes that defeat in war is a "powerful but not sufficient" condition for revolution.

Why is this the case? Sorokin's arguments fit war>rev as well as rev>war. Change disturbs order and leads to violence; (indeed, the whole point of the hegemonic/systemic change war literature is that war is the mechanism by which the structure and hierarchy of the international system changes). Quincy Wright (1965) makes a similar argument that war destroys existing political "values, institutions, and standards", which promotes "radical changes." Wright's formulation translates into war promoting disintegration promoting revolts and revolutions.

Any war, but particularly lost war, also threatens governmental legitimacy in a variety of ways. Wintrobe (1990) perceives the basic governmental-society relationship as one of political exchange. His argument can be translated into war leading to the disruption of the government's side of the political exchange relationship, with the government being perceived as not living up to its side of the bargain, to citizen defection, to revolution. Thus, war may reduce a government's resources, thereby weakening its ability to meet demands, and thereby leading to a loss of legitimacy.

If one major theme in the revolution literature is that losing a war weakens a government's legitimacy through decreasing its ability to meet society's expectations, a second major theme is that war weakens legitimacy and promotes opposition and dissent because it forces government to extend and deepen its extraction of societal resources. As governments seek to take greater resources from society, resistance is generated. Tilly (1975) argues that the extraction of men, supplies and especially taxes to meet the needs of war, promotes resistance from both the masses and elites; with revolution a

possible result. He develops this view while studying the rise of the Western state system, and uses the European disturbances of the 1640s as examples. Tilly (1990) elaborates on this relationship by noting that war can lead to increased extraction, which leads to increased state intervention in everyday life. This increased intervention can lead to new claims on the state, which if not met, could lead to revolution. This increased intervention may also generate collective action and resistance. See also, Levy (1989), Stohl (1980), Adelman (1985), and Finer (1975) for variations on this theme.

A third theme is based on war reducing not only the government's ability to meet societal demands (and thus dropping its legitimacy), but war reducing the coercive and repressive capacities of the government. An opposition need mobilize much fewer resources if the government's ability to control society is destroyed or diminished. Again, Tilly (1973, 1975) uses this theme in looking at the Russian Revolution- with war (especially defeat in war) weakening governmental repressive capacity, (what Eckstein [1980] calls "coercive blockages"). Eckstein cites Huntington, Arendt, Seton-Watson, and Hagopian as examples of writers who have used this war>rev model. (Both Finer 1975, and the Feierabends 1971, also make this argument implicitly.)

While many other war>rev linkages could be drawn, one last theme will be noted, because it brings us full circle back to the idea of change. Gurr (1973), in looking at etiological theories of revolution, notes that the extent, scope, pattern and rate of change in values, norms and institutions are possible causes of revolution. While unspoken, it is clear that war could affect these changes in values, norms and institutions. Goldstone (1980), in commenting on the work of Tilly and Skocpol, notes that war can promote change in value systems, create new interest groups and coalitions, change the resource

distribution among such groups and coalitions, and thus prime society for conflict over values and resources, including revolutionary conflict.

Given the set of possible rev>war and war>rev linkages outlined above, it is also possible to note the discussion of series or sequences of war and revolution occurrences. Skocpol (1988) notes a war>rev>war sequence that characterized the French, Russian and Chinese revolutions. As war weakened the legitimacy and repressive capabilities of the governments (and increased discontent and resistance, a point not salient to Skocpol's analysis), revolutions occurred. Revolutions, however, "enhanced national capacities to wage humanly costly foreign wars" (1988:152). This is very similar to Adelman's (1985) arguments that war weakens states, leaving them vulnerable to revolution. However, after the revolution occurs, more war follows due to the military restructuring and re-invigoration previously noted. Halliday (1990) uses Skocpol's great revolutions examples, but also adds the experience of Turkey, moving from the defeats of the Ottoman wars to the Young Turks movement of 1908 to the Balkan wars (and ultimately World War I). Sorokin's view of change leading to violence can go from either war to revolution or revolution to war, and as each creates more change the process may continue on to more war or revolution. The same process can occur on the basis of the Most and Starr diffusion model, with any combination of war and revolution, and any combination of positive spatial diffusion or positive reinforcement (see Most and Starr, 1980).¹⁴

Relating C.R.S.T: Some Examples

By reviewing some of the basic revolution and war relationships found in the conflict literature we can highlight possible tradeoff relationships, and

narrow the range of C-R-S-T relationships that require detailed investigation. For example, two important views of rev>war lead us to focus on the relationship between T_i and R_{jj} that is, the internal threat within state, and the external risk faced by state j .¹³ The diversionary theory of war and the conflict-cohesion hypothesis discussed in the section on rev>war clearly indicates that as T_i increases there would be pressures on state, to initiate war against some state p - thus, as T_i increases one way to restore the desired relationship between S_i and T_i would be to export conflict, thus raising the external risks faced by some other country (R_j).

Similarly, the logic behind the Most and Starr diffusion model indicates that as T_i increases, state, requires internal resources to deal with the domestic threat to viability. This would mean that C_i decreases both raising R_i and lowering R_j . The increase in T_i results in making state, a target of outside intervention, a possible outcome of the diffusion model and other approaches to the study of war and revolution noted above (e.g. Goldstone, 1986; Halliday, 1990).

Revolution was also discussed as leading to the initiation of external conflict. Adelman (1985), for example, pointed towards revolution ultimately increasing the strength of state, - C_i . This, in turn, could lead to increasing the risks to other states, R_j . As R_j increases it could be expected that steps will be taken to increase C_j in order to meet the threat. This simply outlines and indicates the standard security dilemma of one state's security (viability) being another state's insecurity. All of these processes begin with the S_i - T_i relationship, and the effect it has on C_i . This effect was discussed above as being of potential import to the theories of war which are based on the

differential growth of power. Ultimately, this will be key in understanding the relationship between great revolutions and system change wars.

Again, these examples provide some idea of the relationships that need to be ordered in some way. States are concerned with the C-R ratio as well as the S-T ratio. In some instances the aim may be a status quo— keep the ratios as they were in some previous period, don't let them deteriorate. In other cases governments may be continually trying to improve on past ratios, either in some relative manner, to reach some threshold, or to maximize them. In this way the goals are not status quo oriented but aim towards systemic change (as is found in Gilpin's model of war and change, for example).

Returning to the initial discussions of this paper, as summarized by Figure 3, how is this to be done keeping both levels in mind? Governments will be faced with a decreasing marginal utility in the increments to C or S, especially if increasing C damages the S-T ratio, or increasing S damages the C-R ratio. This brings us back to the idea of tradeoffs in both the use of resources and the search for resources. In the final section of the paper I will briefly outline a strategy for modeling these tradeoffs and the relationships they represent.

A MODELING STRATEGY⁶

One strategy for approaching the various issues raised in this paper is the use of economic models of what we might call the "security production function." That is, a comparative statics approach that uses viability thresholds and indifference curves will allow us to incorporate tradeoffs between C-R and S-T, and model consequences of the choices of decision makers within the government. The tradeoffs will be based on different production

possibility frontiers (which can be conceptualized as acting like budget constraint lines). These frontiers allow us to represent the total "resource package" available to decision makers— an array of internal and external resources (such as those represented in Figure 3). Given this array, a state can produce finite or limited levels of internal and external security; the amount of each type depending on the amount of the other.

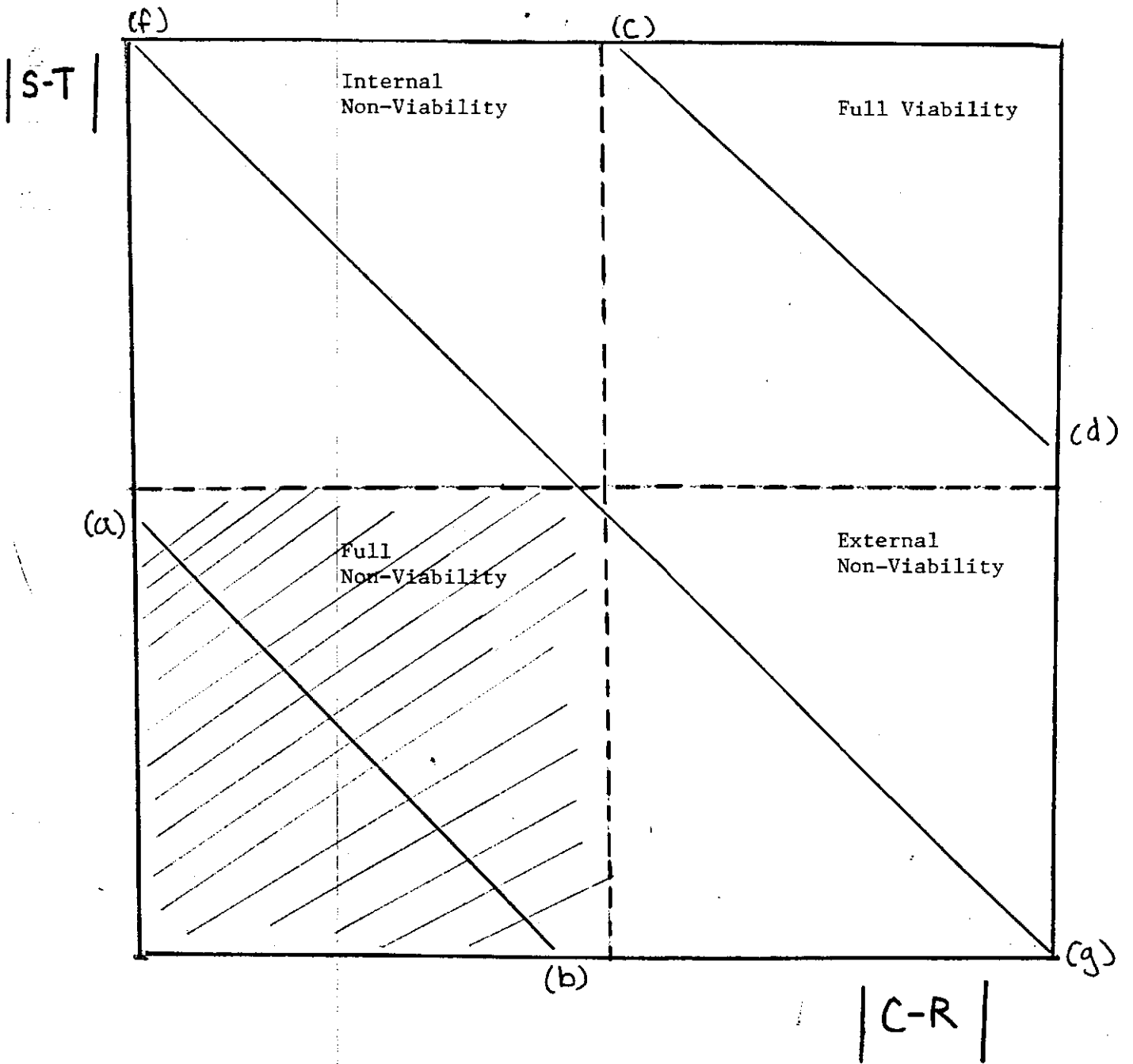
[FIGURE 4 about here]

Figure 4 is one way to represent the C-R to S-T relationships. The lines that divide the figure into four regions can be seen as viability thresholds. They delineate regions in which: the state is non-viable or totally insecure; the state is fully viable; and where either internal or external non-viability exists. The decision problem faced is different in each region or quadrant.¹⁷

If a production possibility frontier such as *ab* exists in the bottom left quadrant, then the government must consider strategies which will provide paths out of that quadrant. The question here is how to generate new or more resources to move the frontier line upwards and to the right (e.g. anywhere along line *fg*), not how best to tradeoff resource usage. This would raise issues of getting some outside resources or intervention, forming alliances, generating or extracting far more resources internally, etc. The search for additional resources thus aims to move the production possibility frontier into the top right quadrant (for example, line *cd*).

Each frontier that can exist outside of the region of non-viability represents some combination of tradeoffs. In the region of internal non-viability governments would have to consider substantial movements of resources from C to S; in the region of external non-viability similar movements from S to C would be necessary. To understand this issue fully, I will need to

FIGURE 4
MODELING SECURITY/VIABILITY



investigate the literature on how governments respond to internal opposition, and how that opposition reacts to governmental accommodation or repression (e.g. Wintrobe, 1990; Lichbach, 1984, 1990). Frontiers in the upper right quadrant represent most of the tradeoff situations outlined in this paper. A straight frontier line such as cd can be seen as representing a pure tradeoff situation. Traditional indifference curves can and should be produced for each of the regions where some viability exists, but are clearly most useful in the upper right quadrant. Both the tradeoffs and the effects of the tradeoffs in terms of C-R and S-T can then be generated and analyzed.

In effect, based on the literature reviewed, a number of relationships between revolution and war can be found, a set of verbal relationships among C-R-S-T can be derived, and a set of models for governmental reaction to revolution can be outlined (not yet done). From these, a variety of objective functions can be specified which will shape the indifference curves. A variety of production possibility frontiers of different lengths and steepness can also be utilized for analysis. This analysis will then tell us what the consequences of various tradeoffs will be under various conditions.

From these results we can produce scenarios of what should be happening under different conditions, that is, in different historical situations. I will then have a framework to use for analyzing revolutions and war, and for comparing the historical cases to the framework and to each other. As noted in Starr (1990:26) this will permit the development of "matching rules" which are,

in essence qualitative criteria which map model parameters to characteristics of specific cases. The technique used to develop these rules is similar to George's (1979:56) description of the development of 'general questions to be asked of each case in controlled comparison.' ...The result is sets of well defined rules which provide standard criteria for connecting any case to a model configuration. (Simon, 1991:ch.1,p.7)

NOTES

A number of individuals have commented on Starr (1990) which outlined the general concerns and shape of my project on revolution and war; others have provided comments on this project and suggestions about relevant literature and future research directions. In alphabetic order I would like to thank them for their thoughts and suggestions: Bruce Bueno de Mesquita, Mark Lichbach, Roy Licklider, Mike McGinnis, Manus Midlarsky, Cliff Morgan, Karen Rasler, Peter Sederberg, and Charles Tilly. In addition, Mark Lichbach and I made presentations on "War and Revolution: A Discussion of Research Frontiers," a colloquium sponsored by the Political Science Department at Indiana University, January 10, 1991. I would like to thank those participating for their comments, especially Elinor Ostrom, Michael Squires, and John Williams. In addition to general comments, Jeffrey Hart, Mark Lichbach, Mike McGinnis and Marc Simon were particularly helpful in discussing and developing potential strategies for formal modeling. All these colleagues have provided useful lessons; I may have been less apt as a pupil. All errors and shortcomings, are, of course, my own.

1. There have been several recent works that explicitly focus on this version of the internal-external relationship, especially Mastanduno, et. al. (1989), Lichbach (1984), Tilly (1985b), Putnam (1988), Tsebelis (1990), Simon (1991).

2. As noted in Starr (1990), there is an interesting question regarding terminology. Many terms and definitions are found referring to the government in power and the groups/forces which oppose them. Governments can be "challenged" from both the outside and inside. Since Gilpin (1981) refers to the state rising to confront the leading power for systemic hegemony as the "challenger," this term will be used to indicate external challengers and another term will be employed for internal conflict. Following Jackson, et. al. (1978:631) I will use the term opposition for "individuals engaged in activities the regime considers threatening." I will also use government for conflict at both levels, but with the meaning Jackson, et.al. give to the term regime ("the set of state agents with authority over a wide range of issue areas").

"Opposition" groups, following both Tilly (1978) and Simon (1991:ch.2) will be considered internal challengers who do not pursue their challenge through routine means for making claims on the government, but who employ non-routine, non-accepted means for making such claims.

3. Figures 2 and 3 are derived from discussions with Mark Lichbach and Michael McGinnis, respectively. Jeffrey Hart and Marc Simon also contributed to my thinking about these figures.

Note that in critiquing the aggregate, cross-national data analysis of the relationship between violence and dissent, Lichbach (1987:292) says that simply "dissecting an opposition group's choice into two tactics and a government's choice into two responses is sufficient to show how aggregate models of repression and dissent mask key theoretical issues in the etiology of violence." This is in line with arguments developed by Most and Starr (1989), and is part of the rationale behind this entire project.

4. Rule (1988:29) uses the terms of Granovetter to indicate that Hobbes was "concerned with how governments shape thresholds. The good government is one that keeps its citizens' thresholds high enough so that slight perturbations, such as outbreaks of civil violence or other nonnormative acts, do not touch off chain reactions leading to collapse of civil authority."

5. The points on limits to extraction and viability were raised by Marc Simon and Michael Squires, respectively.

6. Russett (1987:188) observes, "In fact, a government with its hands full trying to put down acts of civil rebellion may go to substantial lengths to avoid becoming embroiled in an international conflict." This is in distinction to the diversionary theory of war or the conflict-cohesion hypothesis to be discussed below. The diversionary theory was not explicitly raised here because Figure 3 is concerned with the search for, or extraction of, resources.

7. Another example is the observation by Duffy and Frensley (1989:1): "Community conflicts can produce profound international consequences. During successive rounds of mobilization and countermobilization, conflicting parties may appeal for the intervention of their extranational allies. Alternatively, extranational actors may find that conflict trends threaten their interests and intervene of their own accord."

8. Or, as Riser and Ostrom note (1982:186), "The decision maker, in other words, chooses a strategy that is suitable to the decision situation."

9. While many examples of this could be presented, let me note just one, which indicates how the search for resources to deal with external problems can generate internal problems. In a study which investigates the use of "divide and rule" strategies as a way to manage and structure "uncooperative social relationships," Baumgartner, et. al. (1975) note that a "fragmentive control strategy" would be employed by a government to prevent individuals or groups from organizing or coordinating, and thus threatening governmental policy, control, or, as used here—viability. However, in external situations of crisis or war, as noted above in Figure 3, such a government would need to extract more resources from society: "Thus, in order to exploit their subordinates more effectively for productive or defense purposes, rulers must organize them, even though this organization potentially can be used against them" (1975:424, emphasis added). The dynamic facing the government is simple— for internal control, the strategy is to keep individuals and groups fragmented; but to raise the resources necessary to conduct external policies, the government must promote the organization of the same individuals or groups.

10. I am trying to keep in the spirit of the following admonition by Rule (1988:43): "...rational choice models only move from the provocative and interesting to the convincing by identifying sets of data for which the models provide better accounts than do alternative possibilities. We need more serious efforts to confront the models with such serious evidence."

11. As noted in Starr (1990), one possible research strategy that could be pursued using these models entails three basic steps (following that of Simon, 1991:ch.1): (1) develop models and use them to generate propositions about

patterns of conflict and expectations of behavior under certain conditions; (2) connect "real-world cases" to the models; and (3) then compare the expectations and patterns generated by the model to those of the case studies. Tsebelis (1990:238) adds that, "The rationality principle and the corresponding comparative statics method can also lead to the discovery of mistaken theoretical arguments."

12. Peter Sederberg raised this distinction in a discussion of the various critiques of Gurr's work.

13. Most of the war literature, however, ignores this dimension. Gilpin, for example, provides only one comment on the possible relationship of revolution to international change (1981:203): "...it might be argued that domestic revolution can change the international system. This is partially correct..."

14. Most and Starr discuss four types of relationships. Positive diffusion indicates that prior violence in one state leads to more violence in another; positive reinforcement means that prior violence by that state leads to more in the future. However, one major contribution of their work was the specification of negative relationships as well: that prior violence in one state could reduce the probability of future violence in other states (negative diffusion) or that prior violence by a state would make it less likely to engage in future violence itself (negative reinforcement). In addition to the diffusion work of Most and Starr, there are suggestions in the literature that internal conflict or revolution could reduce the probability of subsequent war—by making states less inclined to make or fulfill deterrent threats (e.g. Huth and Russett (1990), or simply less inclined to initiate war due to the constraints/costs of prior violence (e.g. Hazelwood, 1975; Kegley, et. al., 1978).

15. Cliff Morgan provided some thoughts on possible T_i and R_j relationships, from which this discussion has developed.

16. This section is based on discussions with Michael McGinnis and Jeffrey Hart, with whom I will be collaborating for the expansion, development and application of these models in future papers.

17. As McGinnis has noted in our discussions, these regions of non-viability can be represented by "thick indifference curves."

REFERENCES

- Adelman, Jonathan R. 1985. *REVOLUTION, ARMIES, AND WAR*. Boulder, CO: Lynne Rienner.
- Aya, Rod. 1979. "Theories of Revolution Reconsidered: Contrasting Models of Collective Violence." *THEORY AND SOCIETY* 8: 39-99.
- Baumgartner, T., W. Buckley, and T. Burns. 1975. "Relational Control: The Human Structuring of Cooperation and Conflict." *JOURNAL OF CONFLICT RESOLUTION* 19: 417-440.
- Boulding, Kenneth E. 1962. *CONFLICT AND DEFENSE*. New York: Harper and Row.
- Brinton, Crane. 1965. *THE ANATOMY OF REVOLUTION*, Revised ed. New York: Vintage Books.
- Bueno de Mesquita, Bruce. 1983. "The Costs of War: A Rational Expectations Approach." *AMERICAN POLITICAL SCIENCE REVIEW* 77: 347-357.
- Bull, Hedley and Adam Watson, eds. 1984. *THE EXPANSION OF INTERNATIONAL SOCIETY*. Oxford: Oxford University Press.
- Coser, Lewis A. 1956. *THE FUNCTIONS OF SOCIAL CONFLICT*. New York: Free Press.
- Doran, Charles F. 1989. "Systemic Disequilibrium, Foreign Policy Role, and the Power Cycle." *JOURNAL OF CONFLICT RESOLUTION* 33:371-401.
- Dougherty, James E. and Robert L. Pfaltzgraff. 1990. *CONTENDING THEORIES OF INTERNATIONAL RELATIONS* 3rd ed. New York: Harper and Row.
- Duffy, Gavan and Nathalie J. Frensley. 1989. "Community Conflict Processes: Mobilization and Demobilization in Northern Ireland." Presented at the annual meeting of the American Political Science Association, Atlanta.
- Eckstein, Harry. 1980. "Theoretical Approaches to Explaining Collective Political Violence." In *HANDBOOK OF POLITICAL CONFLICT* ed. Ted Robert Gurr. New York: Free Press.
- Feierabend, Ivo K. and Rosalind L. Feierabend. 1971. "The Relationship of Systemic Frustration, Political Coercion, and Political Instability: A Cross-National Analysis." In *MACRO-QUANTITATIVE ANALYSIS* ed. John V. Gillespie and Betty Nesvold. Beverly Hills: Sage.
- Finer, Samuel S. 1975. "State- and Nation-Building in Europe: The Role of the Military." In *THE FORMATION OF NATIONAL STATES IN WESTERN EUROPE* ed. Charles Tilly. Princeton: Princeton University Press.

- George, Alexander L. 1979. "Case Studies and Theory Development: The Method of Structured, Focused Comparison." In DIPLOMACY ed. Paul Gordon Lauren. New York: Free Press.
- Gilpin, Robert. 1981. WAR AND CHANGE IN WORLD POLITICS. Cambridge: Cambridge University Press.
- Goldstone, Jack. 1980. "Theories of Revolution: The Third Generation." WORLD POLITICS 32: 425-453.
- Goldstone, Jack, ed. 1986. REVOLUTIONS: THEORETICAL, COMPARATIVE AND HISTORICAL STUDIES. San Diego: Harcourt, Brace, Jovanovich.
- Gurr, Ted Robert. 1973. "The Revolution-Social Change Nexus." COMPARATIVE POLITICS 5: 359-392.
- Gurr, Ted Robert, ed. 1980. HANDBOOK OF POLITICAL CONFLICT. New York: Free Press.
- Gurr, Ted Robert. 1988. "War, Revolution, and the Growth of the Coercive State." COMPARATIVE POLITICAL STUDIES 21: 45-65.
- Halliday, Fred. 1990. "'The Sixth Great Power': On the Study of Revolution and International Relations." REVIEW OF INTERNATIONAL STUDIES 16: 207-221.
- Hazlewood, Leo. 1975. "Diversion Mechanisms and Encapsulation Processes: The Domestic Conflict-Foreign Conflict Hypothesis Reconsidered." In SAGE YEARBOOK OF FOREIGN POLICY STUDIES, Vol. III ed. Patrick J. McGowan. Beverly Hills: Sage.
- Huth, Paul and Bruce Russett. 1990. "General Deterrence Between Enduring Rivals: Testing Three Competing Models." Presented at the annual meeting of the American Political Science Association, San Francisco.
- Jackson, Steven, Bruce Russett, Duncan Snidal and David Sylvan. 1978. "Conflict and Coercion in Dependent States." JOURNAL OF CONFLICT RESOLUTION 22:627-57.
- Kegley, Charles W., Neil R. Richardson and Gunter Richter. 1978. "Conflict at Home and Abroad: An Empirical Extension." JOURNAL OF POLITICS 40: 742-752.
- Kick, Edward L. 1983. "World System Properties and Military Intervention-Internal War Linkages." JOURNAL OF POLITICAL AND MILITARY SOCIOLOGY 11: 185-208.
- Kiser, Larry L. and Elinor Ostrom. 1982. "The Three Worlds of Action: A Metatheoretical Synthesis of Institutional Approaches." In STRATEGIES OF POLITICAL INQUIRY ed. Elinor Ostrom. Beverly Hills: Sage.
- Kugler, Jacek and A.F.K. Organski. 1989. "The Power Transition: A Retrospective and Prospective Evaluation." In HANDBOOK OF WAR STUDIES ed. Manus I. Midlarsky. Boston: Unwin Hyman.

- Kuran, Timur. 1988. "Collective Choice and Preference Evolution: The Role of Cognitive Limitations." Presented at the annual meeting of the Western Economic Association, Los Angeles.
- Levy, Jack S. 1989. "The Diversionary Theory of War: A Critique." In HANDBOOK OF WAR STUDIES ed. Manus I. Midlarsky. Boston: Unwin Hyman.
- Lichbach, Mark Irving. 1984. "An Economic Theory of Governability: Choosing Policy and Optimizing Performance." PUBLIC CHOICE 44: 307-337.
- Lichbach, Mark Irving. 1987. "Deterrence or Escalation?" JOURNAL OF CONFLICT RESOLUTION 31:266-97.
- Lichbach, Mark Irving. 1989. "An Evaluation of 'Does Economic Inequality Breed Political Conflict?' Studies." WORLD POLITICS 41:431-70.
- Lichbach, Mark Irving. 1990. "Will Rational People Rebel Against Inequality?" AMERICAN JOURNAL OF POLITICAL SCIENCE 34: 1049-1076.
- Maoz, Zeev. 1989. "Joining the Club of Nations: Political Development and International Conflict, 1816-1976." INTERNATIONAL STUDIES QUARTERLY 33: 199-231.
- Mastanduno, Michael, David A. Lake and John Ikenberry. 1989. "Toward a Realist Theory of State Action." INTERNATIONAL STUDIES QUARTERLY 33: 457-474.
- McGinnis, Michael. 1990. "The Micro-Foundations of International Order: A Preliminary Analysis." Workshop for Political Theory and Policy Analysis, Indiana University, Bloomington.
- McNeill, William H. 1982. THE PURSUIT OF POWER. Chicago: University of Chicago Press.
- Most, Benjamin A. and Harvey Starr. 1980. "Diffusion, Reinforcement, Geopolitics and the Spread of War." AMERICAN POLITICAL SCIENCE REVIEW 74:932-46.
- Most, Benjamin A. and Harvey Starr. 1989. INQUIRY, LOGIC AND INTERNATIONAL POLITICS. Columbia, SC: University of South Carolina Press.
- Oberschall, Anthony. 1978. "Theories of Social Conflict." AMERICAN REVIEW OF SOCIOLOGY 4:291-315.
- Organski, A.F.K. and Jacek Kugler. 1981. THE WAR LEDGER. Chicago: University of Chicago Press.
- Putnam, Robert D. 1988. "Diplomacy and Domestic Politics: The Logic of Two-Level Games." INTERNATIONAL ORGANIZATION 42:427-60.
- Rosecrance, Richard. 1963. ACTION AND REACTION IN WORLD POLITICS. Boston: Little, Brown.

- Rosenau, James N. 1980. "Thinking Theory Thoroughly." In THE SCIENTIFIC STUDY OF FOREIGN POLICY, Revised edition. London: Frances Pinter.
- Rule, James B. 1988. THEORIES OF CIVIL VIOLENCE. Berkeley: University of California Press.
- Russett, Bruce M. 1987. "Economic Change as a Cause of International Conflict." In PEACE, DEFENCE AND ECONOMIC ANALYSIS ed. Christian Schmidt and Frank Blackaby. London: Macmillan.
- Schelling, Thomas C. 1978. MICROMOTIVES AND MACROBEHAVIOR. New York: W.W. Norton.
- Simon, Marc. 1991. "A Dynamic Model of Escalation in Civil Conflict: Implications for International Intervention." Ph.D. Thesis [in progress], Department of Political Science, Indiana University, Bloomington.
- Skocpol, Theda. 1979. STATE AND SOCIAL REVOLUTIONS. Cambridge: Cambridge University Press.
- Skocpol, Theda. 1988. "Social Revolutions and Mass Military Mobilization." WORLD POLITICS 40: 147-168.
- Small, Melvin and J.D. Singer. 1982. RESORT TO ARMS. Beverly Hills: Sage.
- Sorokin, Pitirim A. 1957. SOCIAL AND CULTURAL DYNAMICS, Revised/abridged edition. Boston: Porter Sargent.
- Starr, Harvey. 1990. "Modeling the Intrnal-External Linkage: Rethinking the Relationship Between Revolution, War and Change." Presented at the annual meeting of the American Political Science Association, San Francisco.
- Stein, Arthur A. 1976. "Conflict and Cohesion: A review of the Literature." JOURNAL OF CONFLICT RESOLUTION 20: 143-172.
- Stohl, Michael. 1980. "The Nexus of Civil and International Conflict." In HANDBOOK OF POLITICAL CONFLICT ed. Ted Robert Gurr. New York: Free Press.
- Tilly, Charles. 1973. "Does Modernization Breed Revolution?" COMPARATIVE POLITICS 5: 425-447.
- Tilly, Charles. 1975. "Reflections on the History of European State-Making." In THE FORMATION OF NATIONAL STATES IN WESTERN EUROPE ed. Charles Tilly. Princeton: Princeton University Press.
- Tilly, Charles. 1978. FROM MOBILIZATION TO REVOLUTION. Reading, MA: Addison-Wesley.
- Tilly, Charles. 1985. "Connecting Domestic and International Conflicts, Past and Present." In DYNAMIC MODELS OF INTERNATIONAL CONFLICT ed. Urs Luterbacher and Michael D. Ward. Boulder, CO: Lynne Rienner.

- Tilly, Charles. 1990. COERCION, CAPITAL AND EUROPEAN STATES, AD 990-1990. Oxford: Basil Blackwell.
- Tsebelis, George. NESTED GAMES. Berkeley: University of California Press.
- Ward, Michael D. and Ulrich Widmaier. 1982. "The Domestic-International Conflict Nexus: New Evidence and Old Hypotheses." 9: 75-101.
- Wintrobe, Ronald. 1990. "The Tinpot and the Totalitarian: An Economic Theory of Dictatorship." AMERICAN POLITICAL SCIENCE REVIEW 84: 849-872.
- Wright, Quincy. 1965. A STUDY OF WAR, 2nd edition. Chicago: University of Chicago Press.
- Zartman, I. William. 1990. "Negotiations in Internal Conflict." Presented at the Conference on Internal Security Negotiations, Johns Hopkins University, Washington, D.C.