
Perspectives

on

Behavioral Science

A Behavioral Science Perspective on the Study of War and Peace

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The purpose of this chapter is to provide a broad sketch of the meaning, history, and current status of a behavioral science approach to the study of war and peace. I write from the perspective of a social psychologist whose involvement in this field of inquiry began in the early 1950s and continues to this day. Thus, my own active involvement in this field spans virtually its entire history, if we think in terms of self-conscious efforts to apply the concepts and methods of the behavioral sciences (a concept that itself did not come into being until after World War II) to the phenomena of war and peace. On the other hand, my perspective is limited by my own disciplinary background and my particular substantive and methodological focus.

Within these limits, the chapter will begin by identifying what I see as the central characteristics of a behavioral science approach to this field. Next it will ask how this approach evolved, particularly in relation to the parallel development of the peace research movement, and what is an appropriate model for defining the scope and purpose of the field. Then, the chapter will turn to a brief and partial review of the present status of behavioral science research on war and peace, using my own current action research program on international conflict as one of many possible illustrations of work in this field. Finally, the chapter will conclude with several propositions about international conflict and conflict resolution that have both informed my work and emerged from it, in the hope

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that these can demonstrate some of the special implications of a behavioral science approach.

Central Features of a Behavioral Science Approach

A behavioral science approach to the study of war and peace can be defined in terms of three central assumptions: (1) that war and peace are forms of human behavior; (2) that they can be studied scientifically; and (3) that they must be viewed from a "systems" perspective. I shall describe these three propositions along with a number of corollaries for each.

War and Peace as Forms of Human Behavior

The basic assumption of a behavioral science approach is that war and peace are forms of human behavior that can be analyzed and understood in terms of the general principles used to study behavior in its various shapes and contexts. This assumption does not, by any means, represent a reductionist stance. It does not imply that nation states function like individuals or groups or that one can readily generalize from interpersonal and intergroup relations to the relations between nations. Nor does it imply that the behavior of a nation can be analyzed by simple aggregation of the behavior of the individuals and groups that constitute it. If anything, a behavioral science approach corrects for some of the reductionist tendencies often found in traditional approaches, such as the tendency to anthropomorphize nations, ascribing to them interests and motives as if they were individuals, or the tendency to equate decision makers with nation states.

The study of war and peace as a form of human behavior does not presuppose a preference for any particular unit or level of analysis. The choice of the proper unit of analysis and level of analysis depends on the specific problem that we are examining. Let us say that our overall objective is to study the determinants of a decision to go to war. Such a study may focus on *individuals* if, for example, we want to understand the impact of crisis conditions and their attendant stress on the cognitive processes of decision makers. It may focus on *groups* if we are concerned with the effects of different interaction processes within a decision-making unit. It may focus on *organizations* if we want to understand how decisions emerge out of the commitments within and the competition between the different units of a complex, bureaucratic decision-making apparatus. It may focus on *societies* if we want to study the effects, for example, of economic conditions or of general public moods on the readiness to go to war. It may take the *international system* as a whole as its unit of

analysis, examining, for example, the effects of imbalances in resources or of the structure of alliances on the outbreak of war. Or it may focus on *macro-indicators* for the international system or for regional or national systems, relating economic or demographic measures to the probability of war. All of these levels of analysis are consistent with a view of war and peace as forms of human behavior. In fact, this view implies that *different* units of analysis are relevant to the study of war and peace and must all be considered in a comprehensive approach to the problem.

This brings us to the most important corollary of the basic assumption that war and peace must be analyzed as forms of human behavior—namely, that the behavioral science study of war and peace is of necessity an *interdisciplinary* enterprise. It draws most heavily on the core disciplines of political science, psychology, sociology, anthropology, and economics. To a lesser extent it draws on such fields as mathematics, history, law, psychiatry, biology, and literature.

The Scientific Study of War and Peace

The second assumption of a behavioral science approach is that war and peace can be studied scientifically, that is, through the development of theoretical models yielding propositions that can be put to empirical test. Thus, as in other fields of science, including social science, the ultimate task of the behavioral study of war and peace is the formulation and testing of general propositions, stated in *if-then* terms or in terms of functional relationships.

This view does not imply an antihistorical stance. However, it tends to treat history not merely as a repository of facts, but as a source of hypotheses, as a storehouse of illustrations, and as a body of data that can be used to test propositions either by way of case studies or by more formal and quantitative means. This kind of use of historical data is no different from what behaviorally oriented historians generally do, whatever their substantive focus may be.

A major corollary of the assumption that war and peace can be studied scientifically is that all the methodological tools used by the various social sciences are potentially applicable to the field of international relations. In keeping with this view, the most notable innovation of the behavioral approach to war and peace has been the development of mathematical models to map the behavior of conflict systems and of quantitative methods to test propositions about war and peace. A behavioral science approach, however, is not restricted to mathematical models and quantitative methods. If anything, it represents a commitment to a *multiplicity* of methods, encompassing the whole range of methodological approaches—quantitative and qualitative—that have been found useful in

the behavioral science disciplines: laboratory and field experiments, simulation, computer modeling, controlled and naturalistic (participant) observation, survey research, archival research, content analysis, case studies, and action research. The essential message of a behavioral approach is its advocacy, not of a particular method, but of the empirical tools of the various social science disciplines to study the phenomena of war and peace.

Systems Perspective

A third feature of a behavioral science approach is that it tends to favor a systems perspective. It does not follow any particular systems theory, nor does it take a systems perspective strictly and exclusively. But it generally views war and peace between nations in the context of the international or global system and of regional systems, instead of focusing entirely on the characteristics and policies of the state actors involved. It looks at system properties in its search for determinants and correlates of war and peace, and at systemic processes in its attempt to understand the dynamics of war and peace. It sees war and peace as products of the interaction between different nations (and other actors) within the system. It postulates an interdependent relationship between the different parts of the system, such that what happens in one part of the system has reverberating effects in other parts. Similarly, it postulates feedback effects, such that the outcome of one set of actions is an input for a new set of system processes.

A systems perspective does not imply a lack of attention to the actors within the system. In fact, one of the implications of a behavioral approach, with its focus on the global system as a whole, is that it assumes *multiple* actors within the system, rather than viewing nation states as the sole relevant actors. Thus, a behavioral approach, while recognizing nation states as the primary actors within the modern international system, also considers the actions and interactions of a variety of other actors—individuals, groups, and organizations, both intergovernmental and non-governmental—in its analysis.

Another corollary of a systems perspective is an emphasis on the continuity between domestic and foreign policy. Domestic conflicts often have international ramifications in many parts of the world. Similarly, international conflicts often become domestic issues in countries that are not directly involved. Thus, actors and issues that have traditionally been outside of the domain of the foreign-policy analyst are brought into a behavioral science analysis.

Finally, another corollary of a systems perspective—related to the notion of *general systems*—is the view that there are certain principles

of conflict relationships that apply to conflicts at different system levels, from the biological to the global. Thus, studies of conflict at lower levels can be useful for the analysis of war and peace. In my own view, it is important to treat this proposition as a weak assumption—as suggestive rather than definitive. There are indeed certain general principles that apply across system levels, but these operate on a highly abstract plane. Concretely, there are vast differences between different kinds of systems. For example, conflicts at the international level differ significantly from interpersonal conflicts in that the system is far more complex, individual actors occupy representative roles, there is a much greater gap between motive and action, and action requires the mobilization of groups, organizations, and publics for societal purposes. Thus, what we know from the interpersonal level of conflict may be very useful in suggesting novel ways of looking at phenomena at the international level, but it would be misleading to assume direct transferability from one level to the other.

Contributions of a Behavioral Science Approach

To social scientists outside of the field of international relations, the three features of a behavioral science approach to the study of war and peace that I have described may appear quite self-evident, especially today. They may well ask whether there are any other ways of studying war and peace. Yet, until the 1950s there were in fact very few international relations scholars who studied war and peace in these terms. There were a number of pioneers, during the period between the two world wars, who approached the problem from a behavioral science perspective even before the concept of behavioral science itself had been invented. One of these is Quincy Wright, a scholar in international relations and international law, whose monumental book, *A Study of War* (1942), looked at war and its determinants from a broad, multidisciplinary point of view. Another is Lewis Richardson, a British Quaker whose profession was physics and astronomy, who developed mathematical models of the causes of war, focusing in particular on the arms race as an interactive process (see his *Arms and Instability*, 1960a). However, most of the work in international relations before the advent of the behavioral revolution tended to be historical (as exemplified by the field of diplomatic history), descriptive (as exemplified by the field of international organization), or normative (as exemplified by the field of international law or by much of foreign-policy analysis). Against this background, the development of a behavioral science perspective, characterized by the view of war and peace as forms of human behavior, susceptible to scientific study, and analyzed within a systems framework, represents a significant reorientation of the study of war and peace.

The Behavioral Science Approach and the Peace Research Movement

What is striking about the central features of the behavioral science approach to war and peace is that they are virtually identical to the way one might characterize the field of peace research, which began to emerge as a self-conscious movement during the same period—the early 1950s (cf. Kelman, 1981). There is only one additional feature that needs to be cited in characterizing the peace research movement: its explicitly normative orientation. Peace research is committed to exploring the conditions for avoiding war and promoting peace. Moreover, the frame of reference within which peace research addresses international relations is worldwide: It is concerned with peace as a global condition rather than merely as a national policy.

The normative orientation of peace research, however, is not incompatible with a behavioral science approach. It does not represent a commitment to a specific ideological line. Beyond the shared commitment to peace as a goal, peace researchers do not subscribe to a particular position about the causes of war or a particular program for achieving peace. Indeed, they would want to subject such positions and programs to critical analysis. Nor do peace researchers agree on the conditions under which they would consider violence justifiable or on the priority they would assign to peace when it conflicts with other values. Basically, then, peace research is normatively oriented in the same limited sense that medical research is normatively oriented by virtue of its commitment to preserving life and health. Though I have serious reservations (to which I shall return below) about the medical model, for health research as well as for peace research, I introduce the comparison here only to make the point that peace research is entirely compatible with the scientific rigor and empirically grounded analysis that a behavioral science approach to the study of war and peace advocates.

I would go even further to propose that the normative orientation of peace research, far from being incompatible with a behavioral science approach, is in fact quite congenial with it. The focus of peace research on the prevention of war and the promotion of peace is tantamount to a *problem orientation* (in contrast to a disciplinary orientation)—an orientation that is one of the wellsprings of behavioral science in general. The concept of behavioral science received much of its impetus from the experience of social scientists in the course of World War II. During the war years, social scientists from different disciplines collaborated on the solution of concrete problems and discovered that the best way to gain a purchase on many problems of social behavior was through a multilevel approach, drawing on the concepts and methods of different

disciplines as they became relevant to the problem at hand. Furthermore, the normative preference of the peace researcher for studying war and peace from a *global* perspective corresponds with the intellectual preference of the behavioral scientist for studying these same phenomena from a *systems* perspective.

Thus, although there is no necessary reason for a behavioral science perspective on the study of war and peace to go hand in hand with the normative commitments of peace research, there is also no reason for it not to do so. And, as a historical fact, I think it is fair to say that these two lines of thinking converged and underwent a common development. The history of the behavioral study of international relations—emerging in the 1950s, achieving a distinct identity in the 1960s, and becoming more or less institutionalized since then—is almost synonymous with the history of the peace research movement. A behavioral science perspective has been the backbone of the peace research movement and the peace research movement, in turn, has provided much of the motivating force behind the behavioral study of war and peace.

Early Experiences

I can illustrate the convergence of these two developments more concretely with an account of some personal experiences, going back to the 1950s, in which an important development in the early history of peace research was directly nurtured by a major development in the early history of behavioral science as such. In 1954, I had the good fortune of being among the first group of Fellows invited to the Center for Advanced Study in the Behavioral Sciences, which had just been established by the Ford Foundation at Stanford. Establishment of the center certainly counts as one of the major landmarks in institutionalizing and giving substance to the concept of behavioral science. Prior to coming to the center, I had been actively involved in founding and working with a group called the Research Exchange on the Prevention of War, which was established in 1952 by a group of mostly young psychologists and other social scientists. Based on the proposition that social science research could potentially contribute to the discovery of alternatives to war in resolving international conflicts, the Research Exchange represented one of the first organized efforts of what later came to be called the peace research movement. Our orientation was interdisciplinary and—although the founders and active members were mostly drawn from the field of psychology—we did manage to attract representatives of other disciplines to some of our activities. We published the *Bulletin of the Research Exchange on the Prevention of War* on a regular basis. We also organized workshops and ran symposia at various professional meetings, which in turn produced some publications.

In retrospect I feel that, all things considered, we accomplished quite a bit. At the time, however, I was becoming impatient with the relative failure of the Research Exchange to attract international relations professionals—and with my own failure to become one. Most of us were nonspecialists in the field of international relations whose motivation derived from our commitment to peace. I became increasingly convinced that, if we were to make continuing progress, we would have to involve professionals and become professionals ourselves. I felt there was a limit to how long one can go on writing programmatic articles and organizing meetings with the message that there are things that can and ought to be done, without actually going out and doing them. It seemed to me that the Research Exchange had reached that limit and I was concerned with moving on to the next phase.

With these concerns in mind, I convened a group of fellows at the center whom I knew to be interested and sympathetic, to discuss the Research Exchange and to solicit their advice on the future course of this enterprise. The atmosphere at the center was extremely conducive to this kind of discussion and there were a number of people there to whom the idea of systematic application of behavioral science to problems of war and peace was very appealing. In particular, Kenneth Boulding and Anatol Rapoport found this idea highly congenial with their own peace commitments and evolving intellectual interests, including their interest in a general systems approach to the analysis of conflict. An additional important input into the thinking of Boulding and Rapoport came from another fellow at the center, Stephen Richardson, who introduced them to the mostly unpublished writings of his late father, Lewis Richardson, whose mathematical models of international conflict (and arms races in particular) I mentioned above. Boulding and Rapoport were stimulated by this work and its implications for the possibility of developing peace research as a systematic field of inquiry. Incidentally, they played an active role in the posthumous publication of Richardson's two books (1960a and 1960b), which brought that work to the attention of a wider audience.

The meetings we had at the center led to a decision to replace the Research Exchange with two separate sets of activities. We concluded that the organizational functions of the Research Exchange (such as symposia, workshops, or joint research efforts) could be carried out most effectively by a committee of the Society for the Psychological Study of Social Issues (SPSSI). SPSSI seemed to be (and indeed turned out to be) a natural home for such a committee, particularly since it had set up a Committee on the Psychology of War and Peace shortly before World War II, which became inactive after the American entry into the war. As for the *Bulletin of the Research Exchange*, we decided to transform

it into a more formal journal and began the process of establishing that publication.

The new journal began publication in 1957 under the title *Journal of Conflict Resolution: A Quarterly for Research Related to War and Peace*. The *Journal* was published out of the University of Michigan, with Kenneth Boulding serving as the first chair of a highly interdisciplinary editorial committee. At the end of 1972 the *Journal* moved to Yale University, where it continues to be published under the editorship of Bruce Russett, maintaining its interdisciplinary character and its conceptual and methodological diversity. The establishment of the *Journal of Conflict Resolution* represented a major turning point in the development of the field of peace research. From the beginning, the *Journal* attracted a number of international relations specialists (such as Richard Snyder, Karl Deutsch, and David Singer) and helped to move the emerging field of peace research in a professional direction. It contributed significantly to giving the field an identity, a definition, and a concrete focal point.

Returning to my theme about the relationship of peace research to behavioral science, let me point out that it was the special atmosphere and the prevailing intellectual orientation at the Center for Advanced Study in the Behavioral Sciences that helped to make possible the establishment of the *Journal of Conflict Resolution*. The emerging concept of behavioral science that pervaded the atmosphere at the center gave both substance and legitimacy to the idea that the theories and methods of various social sciences can be applied to the interdisciplinary, multilevel, systematic, empirical, and often quantitative study of the phenomena of war and peace. The title that we finally gave to the journal, *Conflict Resolution*, also reflected the interest of its founders in the analysis of conflict across systems levels, which was quite in keeping with the systems orientation that was prevalent at the center. Finally, at a more mundane level, the ability to draw on their colleagues at the center gave the founders of the *Journal* a valuable head start. We had the opportunity to solicit, almost instantly, a goodly number of names for a prestigious, interdisciplinary board of sponsors in support of our new venture.

The Two Strands of Peace Research

The discussion of the Research Exchange on the Prevention of War and of the beginnings of the *Journal of Conflict Resolution* helps to highlight a distinction between two major strands that came together in the development of the peace research movement: the work of nonspecialists, that is, of scholars trained outside of the field of international relations, and the work of international relations specialists themselves. What brought these two lines of work together, I submit, is their shared

behavioral science perspective on the study of war and peace. These two strands—which, admittedly, are not entirely separable in practice—are epitomized, respectively, by the two forerunners of a behavioral science approach whom I mentioned above: Lewis Richardson and Quincy Wright.

The first strand is represented by the founders of the Research Exchange and of the *Journal of Conflict Resolution*. Other early centers of peace research—including the Canadian Peace Research Institute and the Peace Research Institute at Oslo, both of which have remained active to this day—were also started and originally led by “nonspecialists.” This strand in the development of peace research derived from an interest among scholars outside of the international relations field—social scientists from different disciplines, as well as occasional physicists, mathematicians, or biologists—in applying their skills to the promotion of peace. Not surprisingly, many of these scholars were Quakers and members of other peace churches, pacifists, world federalists, peace activists, or what Ted Leutz, the major prophet of this line of activity (see Leutz, 1955), used to call “pacifists.”

The second strand is represented by several international relations programs started in the 1950s such as the graduate program at Northwestern University (which, incidentally, brought the two strands together in the joint leadership of Richard Snyder and Harold Guetzkow), the Program on International Conflict and Integration at Stanford University under Robert North's leadership, and the national-indicators group under Karl Deutsch's leadership at Yale and elsewhere. This strand in the development of peace research derived from an interest among a new generation of international relations specialists in applying behavioral science approaches—including quantitative methods, mathematical models, and general social science concepts—to the study of their discipline.

I am proposing that the emergence of peace research as a substantial discipline in the late 1950s and early 1960s can be credited, to a large extent, to the convergence of these two lines of interest—the interest in applying scientific knowledge to the promotion of peace and the interest in developing a scientific base for the field of international relations. Scholars representing these two strands developed an almost symbiotic relationship to one another. They formed a coalition that provided reciprocal stimulation and legitimization. The nonspecialists needed the specialists in order to legitimize their forays into areas in which they had not been trained, to fill in the substantive knowledge they lacked, and to provide reality testing for their conceptual models. The international relations specialists, in turn, needed their nonspecialist colleagues (who were, of course, *specialists* in various behavioral science disciplines on which the new breed of international relations scholars were drawing) as sources of concepts and methods, as well as of the validation and

encouragement that they were unlikely to receive in those days from their more traditional international relations colleagues.

Both groups, by somewhat different paths, became convinced that the concepts and methods of behavioral science could contribute to the study of war and peace and it was this shared conviction that brought them together. In describing the different paths that brought the two groups to this shared conviction, it would be a mistake to draw the line between their respective interests too sharply. The nonspecialists, though strongly motivated by their interest in peace, also had strong scholarly interests and were intellectually intrigued by the prospect of applying their knowledge and skills to the question of war and peace. Conversely, the international relations specialists who became part of the peace research movement, though strongly motivated by their interest in developing a scientific base for their discipline, were generally people who also had a strong commitment to peace (which may in fact have led many of them to the field of international relations in the first place). Without this overlap in interests, it would have been impossible for this coalition to evolve and to function effectively.

A Public Health Model for the Study of War and Peace

The combination of the intellectual perspective and strategy of inquiry of behavioral science with the normative commitments of peace research suggests what I would describe as a public health model for the study of war and peace. I mentioned above, in comparing the normative orientation of peace research to that of medical research, that I have serious reservations about the medical model. Without wishing to downgrade the value of medical research on specific disease entities, I feel that the standard, disease-oriented model is not an adequate basis for exploring *policy-related* issues. It lacks an image of health against which social policy can be evaluated. It does not consider conflicting values and conflicting interests within the society. It does not attend to systemic processes and to interdependencies between different sectors and groups within the social system. It does not provide a basis for assessing long-range consequences of different policies, or for creating the conditions conducive to health on a long-term, society-wide basis. In short, it ignores the socioeconomic and sociopolitical context of health. What is needed to correct for these shortcomings in the medical field is a public health model for policy-relevant research. A public health model encapsulates the spirit and form of a behavioral science perspective.

It is such a public health model, rather than the standard medical model, that I consider appropriate for the study of war and peace (Kelman, 1981). Such a model focuses not only on the absence of war but also

on the nature of a peaceful world. It is based on several assumptions, derived from both the central features of a behavioral science approach and the normative commitments of peace research, as outlined in the first two sections of this chapter.

1. In view of current realities and necessities, the proposed model conceives of the world as a global society, analyzed as a total system with multiple actors (cf. Burton, 1972). That is, the model focuses on a variety of actors—at the individual, group, and organizational level—in addition to the nation state. Such a global perspective places emphasis on the increasing interdependence of the various parts of the international system and on the role of transnational activities, organizations, and institutions. It also takes account of the increasing continuity between domestic and foreign policy and the increasing penetration of nation states by other states and by international or transnational institutions.

2. Establishment and maintenance of peace presupposes attention to the long-term, systemic conditions conducive to war. These include the nature of modern weapons and the accelerated competition in arms; the problems of scarce resources, economic exploitation, and the gap between the rich and the poor; and the practice, in many parts of the world, of oppression and exclusion of certain segments of the population and systematic violation of their human rights. Changes in these conditions may remove some of the major sources of instability in the global system and thus reduce the opportunities, capacities, and motivations for waging war. Concern with these systemic causes of war makes the conditions and processes of social change an integral component of peace research.

3. Peace is not merely the absence of war but the maintenance of a state of affairs that can be defined in positive terms. Thus, it is hard to describe as peaceful a world that is constantly on the brink of war and in which war is avoided only by the threat of nuclear annihilation or by the violent repression of discontented elements. Positive peace does not imply a utopian situation but merely a livable one—a world in which peace is probable, so that individuals and groups everywhere can have a sense of security about their survival and trust that their basic needs will be met and their basic rights protected (cf. Deutsch, 1972). A major indicator of positive peace is the existence of a pattern of cooperative relationships within the global system and its regional subsystems.

4. Peace does not imply an absence of conflict. Some degree of conflict is an inevitable and often desirable process in any social system. Conflict may be a vehicle for enhancing social justice and initiating social change. The problem is not to avoid conflict but to prevent it from turning into mass destruction. Thus, a major concern for peace research is the development of institutionalized mechanisms for conducting conflict by

nonviolent means, as well as mechanisms for managing and resolving conflict (cf. Stephenson, 1982).

5. The establishment of a peaceful and just world order requires a readiness to question current assumptions about the international system and to regard them as only one set of assumptions among various possible ones. Theories drawn from the various branches of behavioral science often suggest alternative assumptions, and the empirical methods of the behavioral sciences provide tools for testing the validity of competing assumptions. Beyond that, one of the agenda of peace research is the active creation of alternative images of the future—including alternative institutional arrangements, belief systems, and patterns of intersocietal interaction—and the evaluation of their desirability and feasibility.

This model of peace research takes a middle position in the debate within the peace research movement between proponents of "negative peace," who argue that the field should restrict itself to studying the conditions conducive to avoidance of war, and proponents of "positive peace," who see the aim of peace research as a commitment to social change and to the achievement of social justice (see Galtung, 1969; Deutsch, 1972; Rapoport, 1972; Curle, 1976; and Singer, 1976). The model I have outlined focuses both on the absence of war and on the nature of a peaceful world. I consider negative peace—by which I mean the absence of systematic, large-scale, collective violence accompanied by a sense of security that such violence is improbable—to be a high-order value and a significant focus for research in its own right. But positive peace—which I would describe as the existence of a world order dedicated to meeting the needs and interests of the world's population—would certainly enhance people's sense of security and reduce the probability of large-scale violence. While I consider it confusing to include social justice in the *definition* of peace, I believe that peace is closely linked to considerations of justice: Justice has a strong bearing on the feasibility, the stability, the universality, and the quality of peace (Kelman, 1981). Thus, issues of economic justice and human rights, as well as related processes of development and social change, have, in my view, an important place on the agenda of peace research.

The public health model of peace research outlined here represents one way of combining the behavioral science perspective and the normative commitments that characterized the peace research movement in its early days—and that still characterize most of the work that would fall under the rubric of peace research today. Many scholars in the field probably share some or all of my assumptions. I doubt, however, that everyone does, in view of the increasing diversity of orientations as the behavioral study of war and peace and the peace research movement have evolved and expanded over the years.

Current Directions in Behavioral Science Research on War and Peace

The behavioral study of war and peace and the peace research movement continue to be closely intertwined. However, whereas peace researchers generally take a behavioral science perspective, the reverse is not necessarily true: Scholars who study war and peace from a behavioral science perspective do not always identify themselves with the peace research movement. Behaviorally oriented international relations scholars today do not need the stimulation and validation from colleagues in other fields to the same degree as their predecessors did in the 1950s and 1960s. Behavioral approaches have now become established within the field of international relations. They are not universally accepted; quantitative and mathematical work in particular is still viewed with some suspicion in certain quarters. There is considerable variation among university departments: some are dominated by behavioral and quantitative types, while in others they are barely tolerated. But, for the field as a whole, it can certainly be said that the behavioral approach has become an accepted way of doing international relations. The peace research movement, therefore, is less important today as a reference group for behaviorally oriented scholars in international relations. Nevertheless, even some scholars who do not identify themselves with peace research—and who may not particularly share its normative commitment—may well participate in meetings of such groups as the Peace Science Society and publish in peace research journals, for the simple reason that these are the fora where much of the work they are interested in is presented and discussed. This is particularly true for quantitative research on macroprocesses of international relations and for the development of formal models.

Peace research itself—that is, the work that goes on explicitly under that rubric—has become greatly diversified and in some cases highly specialized. On the whole, however, it continues to be characterized by a behavioral science perspective on the study of war and peace and by normative commitments to avoidance of war and to promotion of peace as a global condition. The precise activities within the field vary considerably in their purposes, methods, and orientations—ranging from the building of formal models of conflict systems at a highly abstract level to the development and application of techniques of intervention in concrete conflict situations. Institutionally, these various peace research and related activities are carried out through a variety of mechanisms. There is now an increasing number of centers, in the United States and in other parts of the world, devoted to peace research, peace and conflict studies, or conflict analysis and resolution. There are several professional societies and a number of journals in the field. There are organizations

devoted to the practice of conflict resolution or mediation, which have at least in part been stimulated and nurtured by the peace research movement (although most of their work as of now involves conflicts below the international level). There are the beginnings of training programs designed to prepare students in the skills of negotiation and conflict resolution. And there is the recently established United States Institute of Peace, which drew much of its inspiration from the peace research movement; if it continues to maintain its independence of operational units of the government and to live up to the aspirations of those who originally promoted the concept of a "peace academy," it will represent both a major achievement of the peace research movement and a vehicle for its further development.

It is self-evident that a field of the scope and diversity of peace research—or, more generally, the behavioral science study of war and peace—cannot be characterized by a single model to which all its practitioners would subscribe. In a sense, as is true in other fields, peace research is what peace researchers do. And what they do includes a wide variety of activities.

One broad line of investigation in the behavioral science study of war and peace can be described as the systematic study of the macroprocesses of interaction between nations. In this category I would include studies of the correlates of war or of aggressive international behavior. Such studies might examine the effects of domestic conditions (such as political stability or economic well-being) or of the nature of regimes on international behavior or the effects of systemic conditions (such as alliance structure or resource distribution) on the probability of war. Another type of research examines the relationship of specific events of a particular character to the flow of interaction and the state of tension within the international or within a regional system. Yet other types of research in this broad category include the development and testing of mathematical models of arms races and escalation or of negotiation and conflict resolution; game-theoretic analyses of conflict and cooperation; data-based computer modeling of the relationship between domestic indicators and international or global phenomena; and simulations of national decision making and international interaction. (For reviews, illustrations, and critiques, see Alker and Brunner, 1969; Azar, Bennett, and Sloan, 1974; Banks, 1984; Bueno de Mesquita, 1978; Choucri and North, 1975; Eberwein, 1981; Haas, 1965; Isard and Smith, 1982; Kegley, 1975; Midlarsky, 1975; Rosenau, 1974; Rummel, 1972; Russett, 1972; Singer, 1968, 1979, 1981; Ward, 1985; and Zinnes, 1980.)

A second broad line of investigation in this field focuses on the microprocesses of national and international behavior. Here we are dealing, essentially, with a social-psychological level of analysis. This category

includes studies of foreign-policy decision making, focusing, for example, on the role of cognitive processes or group pressures in decision making under crisis conditions, or on the effect of the decision-making structure on the decision process and its outcome. Another focus of study in this category is the role of public opinion in the foreign-policy process, the ways in which public opinion is mobilized by decision makers in the support of foreign policies, and the ways in which public opinion may be mobilized by interest groups to exert pressure on decision makers. There is research on a variety of attitudes relating to foreign policy and international relations, on the role of nationalist ideology, of group identity, and of group loyalty. There is research on perception and images in international relations, and on the role of cognitive processes as assessed, for example, by operational codes or cognitive maps. There have been analyses of deterrence as a strategy of influence and attempts to develop a broader view of influence processes in international relations, including the use of positive incentives. A great deal of research has focused on bargaining and negotiation processes, much of it taking the form of laboratory experiments observing interpersonal conflict and cooperation in prisoner's dilemma or similar games. Finally, I would include in this category observational studies of international organizations, interview studies of diplomats or foreign-policy decision makers, and studies of communities in their relationship to the global society—studies, in other words, that focus on one or another set of relevant actors in the global system whose behavior may have an impact on the probability of war or peace. (For reviews and illustrations, see K. W. Deutsch, 1953; M. Deutsch, 1973; Frank, 1982; George and Smoke, 1974; Herdovicit, 1981; Hermann, 1972; Holsti, 1972; Janis, 1972; Jervis, 1976; Jervis, Lebow, and Stein, 1985; Kelman, 1965; Kelman and Bloom, 1973; Lebow, 1981, 1987; Osgood, 1962; Pruitt, 1981; Pruitt and Rubin, 1986; Schelling, 1960; Tetlock, 1983; Tetlock and McGuire, 1985; and White, 1984, 1986.)

A third broad line of activity involves the conceptualization of alternative approaches to national and international security. The focus here is on nonviolent and nonmilitary mechanisms of conducting conflict and resolving conflict. Research on nonviolent action and civilian defense would fall into this category. So would research on negotiation and on mediation and various other third-party approaches to conflict resolution. Much of the work on conflict resolution has a strong applied thrust, being directed toward the development of methods for resolving conflict and their application to specific international disputes. The work on conflict resolution at the international level is part of a rapidly evolving field of dispute settlement at different systems levels—ranging from family disputes and disputes that have traditionally been brought to court (such as divorce

cases and landlord-tenant arguments), through labor-management conflicts, environmental disputes, community conflicts, and intergroup conflicts, to intercommunal and international conflicts.

Some of the enthusiasm of this emerging field derives from the discovery that similar principles operate across systems levels. While I share some of this enthusiasm, I have already mentioned my reservations about a general systems approach; I find it necessary, therefore, to call attention to the differences among levels and to the danger of treating international conflicts as if they were merely interpersonal disputes writ large. (For reviews and illustrations of alternative approaches to security and conflict resolution, see Azar and Burton, 1986; Berman and Johnson, 1977; Burton, 1969, 1979; Deutsch, 1973; Doob, 1970; Fischer, 1984; Fisher and Ury, 1981; Kelman, 1972; Kelman and Cohen, 1986; McDonald and Bendahmane, 1987; Mitchell, 1981; Pruitt, 1981; Saunders, 1985; Sharp, 1973; Stephenson, 1982; Touval and Zartman, 1985; Young, 1967; and Zartman, 1978.)

This quick tour of several major lines of activity in behavioral science research on war and peace was not meant to be systematic or comprehensive. It was designed merely to list a sample of the kinds of investigations that are being carried out today in this field. In this spirit of sampling, let me flesh out my list with a description of one project with which I happen to be particularly well acquainted—my own action research program on the Arab-Israeli conflict. I will describe very briefly the nature of that work and then review some of the general propositions about international conflict on which the work is based. In doing so, I hope to illustrate one attempt to put a behavioral science perspective on war and peace into practice, in a way that is congruent with the model for peace research that I have outlined.

Interactive Problem Solving in International Conflict Resolution

I have concentrated heavily in recent years on the development and application of a social-psychological approach to conflict resolution that can be called "interactive problem solving" (Kelman, 1972, 1979, 1982, 1986; Kelman and Cohen, 1986). The work belongs in the third of the three general lines of behavioral science research that I described (conceptualization of alternative approaches to security), although it derives from, extensively draws upon, and feeds back into the second line of activity (research on the microprocesses of international behavior). In effect, interactive problem solving represents an operationalization of various aspects of a social-psychological analysis of international conflict. I hasten to add that it does not view the social-psychological level of

analysis and praxis as self-contained but as an *input* into a broader framework for analyzing and resolving international conflicts.

The interactive problem-solving approach derives from and extends the work of John Burton (1969, 1979). It is designed to promote among conflicting parties an analytic, interactive view of their conflict and a process of joint, collaborative problem solving conducive to the discovery of win/win solutions that would leave both parties better off and satisfy their basic needs.

The core and prototype of the approach is what we have been calling the problem-solving workshop, which brings together representatives of conflicting parties for direct, face-to-face interaction in an unofficial setting, in the presence and under the guidance of a panel of social scientists knowledgeable about conflict and group process. I have been intensively involved for fifteen years now in efforts to arrange problem-solving workshops or other, more or less similar opportunities for direct communication among Arabs and Israelis. Most of my work has focused on the Palestinian problem and has brought together Israelis and Palestinians, although I have also done work with Egyptians and Israelis and—outside of the Arab-Israeli dispute—with Greek and Turkish Cypriots. Problem-solving workshops are a special kind of third-party approach—a form of unofficial diplomacy—that utilizes the skills, knowledge, and positions of social scientists as a basis for bringing the parties together and encouraging them to enter into constructive communication. The work can be described as a type of mediation, although our purpose is not to propose—and certainly not to impose—solutions, but to *facilitate* a process that would allow mutually satisfactory solutions to emerge out of the interaction between the parties themselves.

Workshops take place in an unofficial, private context. In my own work, the academic setting has provided this kind of context and has had a very important additional advantage: It is a situation governed by a set of norms—analytic norms, to put it briefly—that can counteract the powerful conflict norms that generally govern interactions between conflicting parties. The setting and its norms make it possible—and necessary—for the parties to move from accusatory, legalistic, and conflict-expressive communication, which virtually eliminates the chance that participants can learn anything new about the other party or about themselves, to an exchange in which they can talk and listen freely. Workshops encourage task-oriented, analytic communication, in which the needs and concerns of both parties are simultaneously placed on the table and in which each party can begin to penetrate the other's perspective and to gain an understanding of the political and psychological constraints under which the other operates. This analytic approach is by no means a cold, intellectual process. Participants are encouraged to express their

emotions. The mutual experience and observation of these emotions is a central part of the analytic process. Each party's opportunity to observe the other's emotional reaction to their own actions, and their own emotional reaction to the other's actions, is a major source of insight into the dynamics of the conflict. The hope is that, as a workshop proceeds, this type of conflict analysis will lead to a process of creative problem solving, in which the parties—having come to view the conflict as a joint problem—will engage in collaborative efforts to discover and invent win/win solutions, responsive to the needs of both.

The role of the third party is to provide the normative framework within which this kind of interaction becomes possible; to select and brief the participants; to serve as a repository of trust in the process for both sets of participants—providing them assurances that their interests will be protected, their sensitivities respected, and their confidences preserved; to establish and enforce the norms and ground rules for interaction; to set a broad agenda and keep the discussion moving in constructive directions; and to make appropriate interventions to facilitate the participants' interaction and learning process. Interventions may take the form of theoretical inputs, content observations, and process observations at the *intergroup level*. The latter are designed to suggest possible ways in which the interaction between the parties "here and now" may reflect the dynamics of the conflict between their communities.

The structure, process, and substantive focus of problem-solving workshops are derived from social-psychological principles. The motivating idea behind workshops is not merely to bring the parties together so that they can get to know each other and accept each other's humanity (valuable though such experiences may be). We are not interested in promoting communication as such, but in promoting a special kind of communication, characterized by analysis of the conflict, exploration of mutual perspectives, generation of new ideas, and joint problem solving.

This communication has a dual purpose: (1) to produce *change* in the participants themselves—change in the form of new perspectives and attitudes; new insights into the other party, their own party, and the nature of the conflict; and new ideas about conflict resolution; and (2) to *transfer* these changes into the policy process, that is, to feed the new attitudes and understandings and the new proposals for conflict resolution into the decision-making process and the political debate within each community. Thus, while we work with individuals, our goal is to produce system-level changes—changes in policy and in the larger conflict system.

Ideal workshop participants from this point of view are individuals who are both in a position to change and to feed what they have learned into the decision-making process and political debate. Preferably, therefore, they should be individuals who are politically active and influential, but

not foreign-policy decision makers themselves. Suitable candidates would be political actors, such as parliamentarians or party leaders, or political influencers, such as intellectuals who serve in advisory positions to political leaders or who are major analysts of the conflict in their respective societies. I have mainly worked with people at these levels, although I have also worked with politically involved "preinfluentials," who in the short run take an active part in the political debate and in the long run can expect to move into influential positions.

In introducing the discussion of this program, I described it as an action research program. The action and research are integrally related to one another. The research is of an informal kind—perhaps it can be labeled as a form of participant observation—because we do not want to introduce any manipulations or measurement procedures that might in any way interfere with the action requirements. But our involvement in an action program gives us the opportunity to make rich, detailed observations of ongoing processes of conflict and conflict resolution to which we would otherwise not have access. Thus, our *action* involvement is essential to our *research*. By the same token, our *research* involvement is essential to our *action* program, since it is our role as researchers that provides the rationale and legitimacy of that program and allows representatives of conflicting parties to interact with each other under our auspices in ways that deviate from the norms that generally govern their relationship.

Central Assumptions of Interactive Problem Solving

The problem-solving workshops that I have briefly described can be seen as an expression and operationalization of a broader approach to conflict resolution, which reflects the behavioral science perspective and the public health model presented in this chapter. I do not wish to imply that the details of workshop methodology evolved out of a deliberate, systematic effort to derive a form of praxis from a theoretical model. Things rarely happen in this orderly a fashion. As is often true, the intervention approach is inspired by a theoretical orientation, but evolves through intuition, through trial and error, through accumulated experience. In this process, there is a continuing interaction between theory and practice. Often we turn to theory to help us choose among different options for organizing or conducting a workshop. Perhaps equally often, we make procedural decisions on intuitive grounds, but discover in retrospect that these decisions flowed from our theoretical orientation. However the form of the interaction between theory and practice, there is no doubt that interactive problem solving is informed by a special perspective on international conflict and a special orientation to conflict

resolution. I will conclude this chapter with a summary of several assumptions about international conflict and its resolution that derive from a behavioral science perspective (or, to put it in more parochial terms, a social-psychological analysis) and that are reflected in interactive problem solving as an operational model.

1. *For certain purposes, the individual is the appropriate unit of analysis in the study and resolution of international conflict.* This proposition follows from the view of the world, stressed throughout this chapter, as a global society, rather than strictly a system of nation states. Without minimizing the centrality of the nation state as an actor in the global system, this view recognizes the growing importance of subnational, transnational, and supranational actors in the system. For analytic purposes, this view enables us to focus on a variety of actors—at the individual, group, and organizational level—depending on the nature of the problem we are considering. It should be clear from the earlier part of my discussion that I am not advocating a reductionist stance, which tries to translate all international relations into psychological processes. The individual level of analysis is not appropriate or useful for all purposes, but it is uniquely suited for certain purposes.

A focus on the individual level is useful in helping understand—and counteract—the resistances to change in a conflict relationship (particularly in an intense and protracted conflict) despite changes in realities and in the parties' interests. These resistances, among decision makers as well as their publics, are typically rooted in psychological needs (such as needs for identity, security, recognition, participation, dignity, justice) and pervasive fears, and the impact that these have on perceptions and beliefs. I am not speaking of personal needs and fears here, but of needs and fears that decision makers as well as citizens share by virtue of their membership in and identification with the collectivity, and that become mobilized through organizational and group processes. Though these are collective phenomena, they are represented in the minds of individuals and have to be dealt with at that level. These needs and fears must be addressed if conflict resolution efforts are to be effective. Furthermore, from an ethical point of view, the satisfaction of basic human needs—articulated through core identity groups—is the ultimate criterion for formulating and evaluating public policies within the global society. Problem-solving workshops contribute to a larger process of conflict resolution by taking the expression and analysis of mutual concerns—of basic needs and fears—as a central part of their substantive focus.

The individual is also a potentially appropriate unit of analysis because certain processes central to conflict resolution take place at the level of individuals. What I have in mind here, in particular, are empathy, insight, and creative problem solving. Workshops are specifically designed to

facilitate the occurrence of these processes in an interactive context. This is not to say that international conflicts can be resolved by bringing together individuals—however important and influential they may be—in a setting that allows these psychological processes to occur. The conflict must be resolved at a political level, through official negotiations, and almost certainly with the participation of powerful third parties who provide the necessary incentives and guarantees. But the success of official negotiations depends on the new understandings and ideas that the parties bring to them. The purpose of workshops is to enable individuals representing the conflicting parties to develop such understandings and ideas through their joint efforts. Workshops can thus provide inputs that can be generated only at the level of individuals (and under favorable circumstances) into the political debate, the decision-making process, and the official, multiparty negotiations.

In sum, both in their substantive focus and in their interactive process, problem-solving workshops represent an effort to produce essential individual-level changes, that is, changes in the perceptions and images of political influentials, as vehicles for system-level changes, that is, changes in national policies and in the larger conflict system.

2. *Conflict resolution requires an expansion of the range of influence processes considered in international relations.* Traditional—that is, “realist” or structural—approaches to international relations have tended to emphasize strategies of influence based on the threat and use of force. This emphasis is probably related to the central role that these approaches assign to power in the relationships between nations and to their tendency to view the structure of the international system as relatively unchanging. Strategies based on threats, such as deterrence theory, may well be appropriate under certain circumstances, but the almost exclusive reliance on such strategies is dangerous and unwarranted. There are serious questions about their effectiveness; they contain within them an escalatory dynamic; and, as a strategy for conflict resolution, they suffer from the high probability that parties will lack commitment to solutions achieved through the use of negative incentives. A central part of the agenda for research on war and peace, therefore, is the exploration of strategies based on the use of positive incentives (cf. Kriesberg, 1984), including approaches involving unilateral initiatives, such as Osgood's (1962) CRIT (Graduated and Reciprocated Initiatives in Tension-reduction) or Anwar Sadat's strategy of unilateral rewards (cf. Kelman, 1985). A key element in the use of positive incentives is providing one's adversaries the necessary reassurances that allow them to enter into a negotiating process and to make reciprocal concessions.

Problem-solving workshops, by increasing the parties' awareness of each other's needs and fears, help them discover positive incentives and

symbolic gestures that each can offer to the other, thus making the process and outcome of negotiations safer and more attractive in the other's eyes. The search for positive incentives and reassuring gestures requires the parties to engage in a process that is very unusual in a conflict relationship: exploration of ways in which each can contribute to the adversary's benefit and enable the other (as well as one's own) side to “win.” This process facilitates the joint discovery of win/win solutions, which leave both parties better off, particularly through creative redefinition of the conflict.

The expanded conception of influence processes that can be brought to bear in a conflict relationship is based on a view of international conflict as a dynamic phenomenon. This view emphasizes the occurrence and possibility of change, in contrast to the emphasis on fixity due to structural constraints. Conflict resolution efforts are geared, therefore, to discovering possibilities for change, identifying conditions for change, and overcoming resistances to change. Such an approach favors “best-case” analyses and an attitude of “strategic optimism” (Kelman, 1978, 1979), not because of an unrealistic denial of malignant trends, but as part of a deliberate strategy to promote change by actively searching for and accentuating whatever possibilities for peaceful resolution of the conflict might be on the horizon. Optimism, in this sense, is part of a strategy designed to create self-fulfilling prophecies of a positive nature, balancing the self-fulfilling prophecies of escalation created by the pessimistic expectations and the worst-case scenarios often favored by more traditional analysts. Problem-solving workshops can be particularly useful in exploring ways in which change can be promoted through the parties' own actions and in discovering ways in which each can exert influence on the other.

3. *Conflict resolution requires a broader conception of the goals of negotiation.* Most international conflicts are not only conflicts between states or governments but also conflicts between societies. They often bring into play basic issues of identity, security, and dignity that are of profound concern to wide segments of the populations involved. Moreover, views of the conflict and its possible resolution tend to be matters of extensive debate and sometimes sharp division within each society. The internal divisions may even lead to implicit or explicit alliances across the conflict line, between segments of the two antagonistic societies. Political leaders are both constrained by the expectations of their population, including the competing expectations of different constituencies within it, and themselves caught up in the emotional issues of how the society is to relate itself to the conflict.

The intersocietal character of the conflict not only creates public resistances to change, which have to be overcome if negotiations are to take place, but also carries implications for the goals to which negotiations

must be directed. It is not enough for negotiations to achieve a brokered compromise settlement, a political agreement hammered together under the pressure of outside powers. For the short run, political leaders must make sure that the outcome of negotiations is acceptable to the majority of their population, which requires them to build a consensus in support of the solution they decide to pursue. For the long run, the negotiations must produce a *resolution* of the conflict, that is, an outcome that satisfies the basic needs of both parties—including their needs for identity, security, and dignity—and that both consider to be at least minimally consistent with the requirements of justice and fairness. I am not assuming that the outcome must completely meet all of the needs of both parties; both must expect to make concessions, and the number of concessions made by each is likely to depend on their relative positions of power. But the solution must be one that forces neither party to concede on fundamental principles, that both see as an improvement over continuation of the conflictual status quo, and that both can accept as an honorable compromise without feeling that their struggle has been entirely in vain. Only such an outcome is conducive to structural and attitudinal change and eventually to reconciliation between the two societies and a transformation of their relationship. This may be an ambitious goal, but nothing less can terminate a protracted, intense, intersocietal conflict.

If the ultimate goal of negotiations is to transform the relationship between two societies in conflict, there are a number of contributions that the interactive problem-solving approach can make to the process. First, in view of the intersocietal character of the conflict, a variety of unofficial interventions—including problem-solving workshops—can play a valuable complementary role to official diplomacy. For example, the exploration of mutual concerns and the invention of mutually acceptable options—both of which are necessary if negotiations are to yield a genuine resolution of the conflict—can happen more readily in unofficial settings than they can within the constraints of official negotiations.

Second, the intersocietal character of the conflict makes conflict resolution a larger political process, involving decision makers and diplomats as well as the politically active segments of the general population. Problem-solving workshops contribute to this process by providing potential inputs, not only into decision making itself, but also into the political debate and the formation of public opinion within each community.

Third, a negotiation process aiming at the ultimate transformation of the relationship between the parties puts a premium on solutions that are not imposed and that emerge out of the direct interactions between the conflicting parties themselves, since such solutions are more likely to reflect the needs of the two societies and to engender their commitment.

Problem-solving workshops are specifically designed to generate such solutions, which can then be fed into the official negotiating process.

Finally, problem-solving workshops are ideally suited to exploring avenues toward conflict resolution that go beyond—or sidestep—the constitutional issues or military arrangements that often dominate the formal negotiation process. What I have in mind are the opportunities for conflict resolution that are created by the state of interdependence that exists within a conflict system. Peace may be a necessary condition for economic development, social change, and improvement of the quality of life in both conflicting societies. Workshops can explore functional arrangements that could meet specific needs of the two societies as steps toward conflict resolution, which might gradually transform their overall relationship. Conversely, workshops may start at the end, developing a shared vision of a desirable future relationship, and then work backward in identifying the steps required to bring such a relationship into being. Ideas generated through this process may improve the climate for official negotiations by demonstrating the possibility of a new relationship; they may also be incorporated in the negotiated agreement.

In sum, resolution of international conflict, given its intersocietal character, requires structural and attitude change conducive to a transformation of the relationship between the conflicting societies. Such changes may actually be taking place on the ground, particularly when the conflict involves interdependent societies in the same regional system, but the dynamics of conflict make it impossible to translate these changes into a political agreement. Approaches such as interactive problem solving can help overcome these barriers because of their unofficial character, their reach into the broader political community, their interactive process, and their ability to go beyond the specific issues under negotiation and explore functional arrangements and visions of a future relationship between the conflicting parties.

4. *Conflict is best conceived as an interactional process with an escalatory dynamic, which must be reversed by conflict resolution efforts.* In contrast to an "essentialist" model, which explains conflict in terms of characteristics of one or both parties, an interactional view focuses on the interaction between the parties, at different levels, as creating the conditions for conflict and helping to feed, escalate, and perpetuate it. Inherent in the dynamics of conflict are profound differences in the perspectives of the parties as well as a tendency to form mirror images. These in turn contribute to the escalatory dynamic of conflict interaction and to resistance to change in a conflict relationship. Cultural differences (in styles, expectations, values, as well as experiences and memories) may exacerbate conflicts by creating barriers to interaction and failures in communication.

Conflict resolution requires a reversal of this typical pattern of conflict interaction. To this end, a different kind of interaction must be developed, which is deliberately designed to counteract the escalatory dynamic of conflict interaction and to set a de-escalatory dynamic into motion. Problem-solving workshops—because of their unofficial setting, their nonthreatening framework for interaction, their nonadversarial approach, and their problem-solving orientation—provide an opportunity to develop such alternative patterns of interaction.

The interaction process within workshops is intimately related to the desired outcome: It serves as a model for the de-escalatory pattern of interaction that is required for effective negotiation of the conflict. Within the workshop setting, conflicting parties are able to explore each other's concerns, penetrate each other's perspectives, and take cognizance of each other's constraints. A focus on mutual perceptions, mirror images, and systematic differences in perspective is particularly conducive to learning to differentiate the enemy image—a necessary condition for movement toward negotiation (Kelman, 1987). The symmetries in the parties' images of each other and in their positions and requirements—which arise out of the dynamics of the conflict interaction itself—are often overlooked because of the understandable tendency to dwell on asymmetries. Exploration of such symmetries, however, can be very helpful because they tend to be a major source of the escalation of conflict (as in the operation of conflict spirals) and a reason for making the conflict intractable; by the same token, they can serve as a major vehicle for de-escalation. The sharing of perspectives also sensitizes each party to the other's historical preoccupations, areas of vulnerability, and cultural expectations, which must be taken into account in any effort to reverse the escalatory dynamic.

Such interactions enable the parties to discover ways of influencing each other, by exploring what the other needs and what they can therefore offer the other to induce reciprocation. Out of such discoveries, creative new proposals for win/win solutions to the conflict can be shaped—solutions that satisfy both parties' fundamental needs and are responsive to their greatest fears. A particularly important product of the interaction between conflicting parties in the context of a workshop is the development of a language of de-escalation, identification of conciliatory gestures, and formulation of a strategy of mutual reassurance, to counteract the escalatory rhetoric and actions that typically mark conflict interaction. Reassurances of this kind are indispensable if parties are to enter into a risky negotiation process.

In sum, my assumption about the interactive nature of conflict and its resolution calls for the development of an entirely different type of discourse in conflict relationships. The interactive problem-solving approach is designed both to model this alternative form of discourse for

the larger conflict system and to make substantive contributions to it. It is a discourse that does not necessarily dispense with deterrence, but places primary emphasis on reassurance and on the communication of positive incentives.

Conclusion

A behavioral science perspective on the study of war and peace supplements and challenges the more traditional theories of international relations—theories based on a "realist" orientation and focusing on the structure of the international system and the power and interests of nation states—in perhaps three ways. These three ways can be linked to the three broad directions of behavioral science research on war and peace that I identified earlier in the chapter.

First, traditional theories offer certain propositions about the behavior of nation states and the conditions conducive to war and peace. Quantitative studies of the macroprocesses of interaction between nations—even when they accept, on the whole, the realist view of the international system—are able to test and often to challenge these propositions by subjecting them to systematic empirical research.

Second, traditional theories make certain assumptions about the psychological processes that intervene between structural, systemic conditions and state actions. Such assumptions refer, for example, to the processes and criteria of foreign-policy decision making or to the effects of threats and promises on the behavior of decision makers. Studies of the micro-processes of national and international behavior have tested and often challenged the reasonableness of these assumptions.

Third, traditional theories are based on a particular conception of the international system, of the forces that account for states of war or peace within it, and of the conditions under which it changes. Research focusing on alternative approaches to national and international security questions revises and often challenges this conception. It does so, for example, by looking at the world as a global society, by studying a variety of actors in addition to the nation state, by exploring the links between foreign and domestic policy, by redefining the concept of security, and by developing new means for achieving security—including nonviolent approaches to conducting conflict and unofficial approaches to resolving conflict.

The assumptions that inform my own work on conflict resolution, discussed in the last section, illustrate one of the most important ways in which a behavioral science or a social-psychological perspective can complement structural theories (without in any way underestimating the significance of structural factors): It provides a handle for dealing with

the occurrence of change in a conflict system, the possibility of further change, and the development of methods for promoting change. Interactive problem solving, I have proposed, can contribute to change in a conflict relationship in several ways: by producing essential changes at the level of individuals that can serve as vehicles for change at the system level; by helping parties in conflict to discover more effective ways of influencing one another; by facilitating not only attitudinal but also structural changes conducive to a transformation of the relationship between the conflicting parties; and by developing an alternative type of discourse among conflicting parties based on mutual reassurance and the use of positive incentives, which is conducive to de-escalation, negotiation, and resolution of the conflict.

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