An Analysis of Conflict

Is economics the most suitable basis for developing a general theory of conflict?

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Kenneth Boulding declares in the preface his continuing conviction that war is "the major moral and intellectual problem of our age," and he says that this book, **Conflict and Defense, A General Theory** (Harper, New York. 358 pp. $7), is not, therefore, a work of "idle curiosity," which usually motivates pure science, but is motivated by "that practical curiosity which inspires applied science." His book is, however, a work of "pure theory," inspired by the conviction that "the intellectual chassis of a broad movement for the abolition of war has not been adequate to support the powerful moral engine which drives it" and by the conviction that, to develop a "theoretical system" adequate to deal with the problem of war and peace, "it is necessary to study conflict as a general social process of which war is a special case."

Boulding acknowledges his debt to the Center for Research on Conflict Resolution, which began at Swarthmore College and continues at the University of Michigan where the *Journal of Conflict Resolution* is published, and to discussions at the Center for Advanced Study in the Behavioral Sciences (Palo Alto, California).

The book is divided into three parts: the first seeks to develop a general theory of conflict; the second discusses applications of this theory to special cases, such as economic competition, industrial conflict, international conflict, and ideological conflict; and the third deals with methods of conflict resolution and control, especially in the present situation.

Boulding is an economist, and he proceeds from economic theory, especially that of competition among a few firms, or "oligopoly." Two questions at once arise: Has he succeeded in developing a general theory of conflict? Is economic competition a suitable basis for approaching a study of international conflict?

Boulding develops a static model of conflict by explicating the concepts of the "behavioural unit," or party to a conflict and the "behavioural space," or field, within which each unit has a present "position," a "history" of changing positions, and potential future positions. The latter may be determinable, precisely, if a "Law" has been discovered or made, which establishes a "stable relationship between positions at different dates" (such as that which applies to the planets); it may be determinable, within considerable margins of error, if each behavioral unit has a consistent system of "value ordering," which gives it an image of the behavioral space it desires and will strive for, and a perception of its "boundary of possibility," correctly indicating the limits of the unit's capability to change, in a given time, its present behavioral space into that which it desires. These concepts permit the construction of a model that indicates the area of inconsistent value ordering by two or more behavioral units, within the overlap of their boundaries of possibility. This is the "area of conflict," within which the behavior of a unit may be "rational," seeking to maximize the realization of its values, consistently ordered, by the adoption of means within its capabilities and suitable to that end. Or it may be "irrational" because the unit has a "false image" of the behavioral space or of the value ordering of the behavioral units which it faces, or because its own value ordering is inconsistent or otherwise "bad" (p. 9).

The course of rational behavior by all units within the conflict area is illustrated by "Edgeworth's contract curve," which Boulding identifies with a "conflict curve," in the sense that movement away from the curve tends toward conflict and movement toward the curve tends toward a condition of stability in which conflict movements (such as an arms race) stop, or a condition in which conflict is resolved by a bargain. The conflict field may, however, present no such curve because there are no points of mutual "acceptability." In this case, conflict continues, perhaps resulting in war or other violent action.

This model somewhat resembles my proposed model of "international relations," a concept broader than that of "international conflict," because it also includes relations of competition, coexistence, and cooperation. The model consisted of a multidimensional analytical field defined by value and capability coordinates, within which "systems of action" move according to their internal characteristics, their relations to one another, and the changing character of the field that results from general changes in these relationships [*The Study of International Relations*, (1955), pp. 543 ff.]. There are, however, differences, partly because Boulding is dealing only with conflict, and partly because he proceeds from economic assumptions, giving greater weight to rationality than to the political assumptions from which I proceeded.

In addition to a static analysis, Boulding presents a dynamic analysis, in which he utilizes "process models" derived from the simultaneous equations developed by the late Lewis Richardson [*Arms and Insecurity* (1960)], to whom he pays high tribute, although he dissents from Richardson's identification of increases in trade with increases in cooperation, considered the opposite of war [Richardson, p. 19]. Richardson tried to explain the probable course of an arms race toward war, stability (peace), or cooperation, under various conditions, especially the condition in which statesmen pursue habitual action-reaction patterns without "stopping to think" [Richardson, p. 12]. Boulding also considers the course of conflict if one or all of the units are "saints" that return good for either good or evil, "devils" that return evil for either, or "publicans" that return good for good and evil for evil. The latter condition is complicated by the fact that publicans often have false images and attribute evil to what the other party intended as good.

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Rôle of Game Theory

Boulding delves into "game theory" and concludes that it works on a level of abstraction too high for practical utility in the "flesh and blood conflicts that we find in the world of man." The uncertainties that arise are the result of the incalculable range of strategies open to the opponent, the high probability of irrationality in his decision-making, and the motivations of "love, affection, empathy and community feeling" alien to the theory of games, which is concerned only with rational action to maximize goal achievement (p. 57).

Boulding admits that the ideas of "payoff matrix" and "minimax strategy" may be useful in analyzing conflict, in proportion as statesmen behave rationally and as the area of decision-making is closely limited by rules of the game established by positive or natural law. The decision-making of sovereign states, however, though in principle limited by international law, is actually exercised with such freedom and frequent irrationality, both in adopting means and in confusion about ends, that the magnitude of uncertainty largely vitiates the utility of game theory in this field.

This seems less true if game theory is used, not by a nonparticipant to resolve a conflict or to predict its consequences, but by a participant to win it. If I want to win a conflict, it is wise for me to act as rationally as I can and to assume that my opponent will act rationally to defeat me. I should not base my strategy on the probability or even possibility that he will not act in his own interest.

More important, in Boulding's opinion, is the theory of "viability," which considers the influence of the unconditional or conditional prospects of survival of the parties to a conflict. In this connection, the effective distance, which, as invasion proceeds, progressively decreases the power of the aggressor and increases that of the defender, is considered an element of stability under past conditions of military technology. In the nuclear age, however, no state is unconditionally viable, and the result is intolerable insecurity, so long as adequate rules of order are either lacking or unobserved.

In a subsequent chapter dealing with the individual as a party, Boulding describes the psychological roots of conflict. He utilizes Kurt Lewin's concept of "life space," perhaps without sufficiently realizing that this concept is subjective—the image of goals and obstacles in the mind of the person involved in a conflict—and thus differs from Boulding's "behavioural space" which corresponds to Lewin's "hull"—the actual situation as it would be described by an all-seeing and impartial observer. Lewin's "life space" explains the external behavior of the person as a "force" in actual situations (p. 81). Both Lewin and Boulding recognize that action depends on the person's image of the situation, not on the situation as it "really" is.

Boulding also discusses Freud's concepts of "ambivalence"—"where a positive and a negative goal are located close together," of "displacement," especially of feelings upon symbols, such as those of the nation or the enemy, and of the relation of "aggression" to "frustration." The quandary, movement, or frustration of Buridan's ass—placed successively midway between two bales of hay, two skunks, or before a bale of hay with a skunk on top of it—illustrates these psychic complexes which may have analogs in national decision-making (pp. 82 ff.).

Boulding considers the sociological roots of the behavior of unorganized groups by ecological, or population models, and by epidemiological, or diffusion models, concerned, respectively, with conflicts, which may arise from differential rates of population growth and from efforts to spread ideologies.

He also pays attention to conflicts among organizations, characterized by the establishment of roles for the members of the group in a decision-making hierarchy or in a division of labor among members of the group. Such conflicts are the dominant form today, and they present difficulties that are due to the complications of the decision-making process, the influence of irrational opinions, the multiplicity of attitudes, and the extensive capabilities of destruction by large organizations, especially nuclear- and missile-armed sovereign states. He examines suggestively the situation of contacts of organizations without conflict, in stable conflict, and in unstable conflict (p. 163). He emphasizes the importance of the self-image held by each of the parties and the frequent divergences of this image from that held by the opponent, and also of both from its image of the opponent's image of that self—a phenomenon which C. H. Cooley described as "the looking-glass self" (p. 165).

Finally, Boulding deals with conflict between the individual, the unorganized group, and the organization, but, surprisingly, he pays little attention to the frequent conflict of organized states with unorganized minorities—racial, cultural, linguistic, and ideological—within its population. This inattention, he explains, is because such groups tend to become organized parties, thus making the situation one of conflict between organizations of somewhat different type (p. 166). He deals extensively with the conflict between the individual and the organized group of which he is a member, suggesting the danger that the dignity of man will be lost in large-scale, intensive organizations. He thinks a compromise must be made between the dangers of anarchy and of tyranny (p. 187).

Boulding undoubtedly makes important contributions to the general theory of conflict in the static and dynamic models that he presents in his first two chapters. The theory needs refinement in its definitions and its analyses: (i) to assist theorists in discriminating its applicability for predicting the probable course of economic, political, social, ideological, and other forms of conflict, (ii) to assist decision-makers in selecting alternative procedures for their resolution, (iii) to assist both in judging the influence of the characteristics of the parties, particularly their decision-making processes, in such prediction or action, (iv) to typify their relationship in the future, and (v) to characterize the total field in which the conflict takes place, to change that field and to judge its influence upon the course and resolution of particular conflicts [see Q. Wright, in *World Politics,* October 1957]. Such refinement would doubtless be assisted by utilization of the concepts and methods of all the social science disciplines, from many of which Boulding has drawn, although his major emphasis is on economic analysis.

This raises the question: Is economics the most suitable basis for developing a general theory of conflict? Economic activities are usually carried on within a field which is limited by legal and social sanctions more restrictive than those that usually exist in the field of political activities, particularly international political activities. Furthermore, economic activities usually

have the character, not of conflict, but of competition between individuals, firms, associations, or governments, or the character of administration of subordinate individuals, firms, associations, or governments, by a government of superior power.

Competition and Conflict

Boulding considers that competition, in its broadest sense, is a situation in which "any potential position of two behaviour units is mutually incompatible," and that it is a broader conception than "conflict" which implies mutual awareness of this incompatibility and of the wish of each to occupy the incompatible position. This inclusion of conflict as a form of competition seems to me hardly consistent with ordinary usage.

Competition is usually intended to refer to the activity of entities independently striving for something of which the supply is inadequate to satisfy all [Q. Wright, *Problems of Stability and Progress in International Relations* (1954), p. 146]. Conflict, on the other hand, usually refers to activities of social entities consciously directed against each other. In these senses, both are forms of opposition or inconsistency and both assume that the parties are what Talcott Parsons calls "systems of action"—that is, entities capable of making decisions by formulating ends and devising means to realize them. Boulding's "behavioural unit" is a broader concept that includes such unorganized groups or aggregates as unorganized minorities, industrial classes, "species of animals or artifacts, or a class of ideas or a theory" (p. 2). These are not "systems of action," though in a broad sense they may engage in competition, as when one animal species, or one human race, culture, technology, language, religion, or economic system gradually supersedes others in an area. Or they may even engage in conflict, as when two billiard balls, two locomotives, or two galaxies collide.

These illustrations indicate that outside of the social, economic, and political sphere, the concepts of competition and conflict are quite different, the one a process of gradual supersession, the other of sudden collision. In the economic, political, and social fields, however, where parties make conscious decisions and consequently are "systems of action," which means they are either individuals or organizations, there is a certain resemblance. Competition may become conflict because the competitors are few, are aware of each other, and are seeking to injure or destroy each other by methods which the law characterizes as unfair. But the concepts remain different because in competition, opposition of the parties to each other is incidental, may be outside the consciousness of either, and may even be regarded as a form of cooperation, as it is by some economists who believe competition promotes efficiency of production, the division of labor, trade, decreasing prices to the consumer, and fair distribution of the product, thus contributing, as Adam Smith insisted, to "the wealth of nations" and the benefit of all.

Biological "Conflict"

Biologists insist that the Darwinian "struggle for existence," which accounts for organic evolution, is not analogous to war and that it is not even a form of conflict but a form of competition in which one variety or species gradually and unconsciously supersedes another, less capable of utilizing the food supply or less capable of reproduction. In conflict, on the other hand, opposition of the parties to each other is the essence of the matter. It occurs among animals in the nonlethal fighting of males of the same species for females, for monopoly of a feeding or nesting area, or for dominance of the group, and it occurs in the lethal fights of individuals or groups of different species for food or dominance as when the lion attacks the antelope or the amazon ant raids the *fusca* for slaves [see Q. Wright, *A Study of War* (1942), pp. 43, 49, 479, 494].

Competition: Economic and Political

In social relations, competition may occur without conflict, as it does in a large market when numerous producers compete but are unaware of one another, and there may be conflict without competition, as there is in a clash of frontier guards, neither of which has orders from his government. The difference is perhaps emphasized by the usual assumption of economists that competitors act rationally. The "economic man" seeks to buy in the cheapest and sell in the dearest market. The economist often regards wars and other international conflicts as outside of his realm, because they usually arise from irrational rivalries, fears, or ambitions, or from unconscious processes of displacement, frustration, or identification. If all men were rational in their behavior, there would be competition, according to the concept of the economist, but there would not be conflict, at least not of a character so destructive that it is uneconomic or suicidal to all the participants. The political scientist, on the other hand, recognizes the irrational elements of human behavior and assigns to these elements a major role in accounting for conflict, especially international conflicts. Economics, therefore, assumes a degree of calculability far beyond that possible in politics. The result is that economic models, whether derived from theories of competition or games, have a low degree of applicability to politics and especially to international politics. Boulding realizes this and discusses the irrational factors of international politics. One has the feeling, however, that his basic models tend to exaggerate the rationality of the participants in international conflict.

Boulding's application of his theory to economic, industrial, international, and ideological conflicts (the second part of his book) indicates both the utility of his theory to these different situations and also the need to introduce special concepts concerning the nature of the parties, the nature of the field, and the nature of the static or dynamic relations involved in each of these situations. By his models of international conflict, which illustrate the "loss of strength gradient," he demonstrates why the state best prepared militarily when the war begins so frequently loses the war (pp. 231 ff. and p. 244).

He recognizes that the competition of ideologies is often influenced by inherent differences in their attractive capabilities. Increasing age and increasing spread of revolutionary ideologies, however, usually result in dilution and decreasing vigor, as in the history of epidemics, with a tendency toward convergence and synthesis. Ideological differences do not lead to conflict unless each creates, or becomes attached to, an organization—church or state—frequently as a result of the activity of a charismatic personality. Such attachment hampers the process of ideological convergence and synthesis, but it usu-

ally results in a condition of competitive coexistence following a period of active conflict. His table illustrating the similarities and differences of the modern western ideologies of Christianity, Marxism, and nationalism in their orthodox and liberal forms, as well as that of "worldliness," may be compared with the analysis made by Charles Morris of the leading value systems of both West and East.

Ways and Means

In the third part of the book, which deals with the resolution of conflicts, Boulding distinguishes resolution by a mutually acceptable procedure from resolution by avoidance or segregation and from resolution by conquest or absorption of one party by the other. He makes fruitful suggestions concerning negotiation, bargaining, conciliation, mediation, law, adjudication, legislation, and other mutually acceptable procedures, noting that the problem is most difficult to solve in international conflicts. Prevention of violence, he notes, may not lead to resolution as indicated by the number of half-states divided by supposedly temporary cease-fire or armistice lines. Conflict has continued between the halves, with little progress toward resolution, for over a decade, despite efforts by the United Nations and other international agencies, in Germany, Palestine, Kashmir, Korea, Vietnam, and China.

In the present situation, Boulding finds that the major difficulty is "reconciling the universal ethics that both science and high religion imply with the particularistic loyalties to existing institutions and responsibilities" (p. 331). The concept of defense has broken down because of uncertainty, whether it is a territorial state, an ideal way of life, or an ideology that is to be defended. In this connection, Boulding might have given more attention to resolution of conflict by avoidance and segmentation or peaceful coexistence. Should international law and the United Nations seek to maintain the peaceful coexistence of territorial states, each free to experiment with its own economic, political, and ideological system within its territory, affecting others only as they may be influenced by study of the virtues and vices of that system as it develops? Or should these universal institutions seek to maintain the dignity of man and human rights with the probability that this will lead to a continuance of high tension and conflict among adherents of diverse ideologies, each convinced that its system will best promote the dignity of man?

Although he hopes that general acceptance of the findings of science and high religion, concerning the dignity of man, will eventually result in synthesis, Boulding evidently favors the first solution in the present era of international politics. He believes religious wars should be ended by the separation of church and state, and that this should include recognition, in the secular world of politics, of the state's priority and of its freedom to determine the policy and economy within its territory, but should permit religious organizations freedom to communicate ideas, even across national frontiers (p. 339). He evidently hopes that in a peaceful world, where the use of international violence as an instrument of international politics is prevented by perceptions of national interest, disarmament, and the United Nations, the better ideas will eventually prevail. Given peace, the potency of the present technology of communication may universalize the forum of discussion, which was the root of Jefferson's optimism.

In conclusion, it should be said that the book represents a great deal of thought and brings together a great many pertinent ideas on the subject of conflict. In spite of its abundance of homely illustrations, it is not easy to read, but it is a must for all serious students of the problem of war.

Genetics, Drugs, Psychology

Experiments in Personality. vol. 1, *Psychogenetics and Psychopharmacology* (274 pp.); vol. 2, *Psychodiagnostics and Psychodynamics* (341 pp.). H. J. Eysenck, Ed. Humanities Press, New York, 1961. $16.

The broad range of recent psychological research at Maudsley Hospital is presented in these volumes. There is genetic research with rats, in which the methods of selective breeding and diallel cross are used to estimate the heritability and dominance of emotionality as indexed by defecation and ambulation; psychopharmacological research designed to study the effects of the depressants, Doriden and Meprobamate, on measures of conditioning, perception, performance, and autonomic functioning; psychodiagnostic research indicating the importance of overinclusiveness and retardation in the thought disorder of psychotics; psychodynamic research, in which measures of learning, performance, and perception are employed to study the excitation-inhibition balance in both normal and neurotic subjects. Heuristically useful sections on factor analytic techniques and the role of theory in psychology are also included.

Taken as a whole, the volumes have considerable merit. Virtually all sections include careful, rather complete reviews of the relevant research literature, with due attention given to important issues and problems. That the appreciation of these issues and problems is not merely academic is reflected in the research procedures and designs, which are generally quite good. Of course, concessions are made to practicality, but even in such instances the authors take responsibility for communicating their decisions.

The large range of material included prompts concern over the extent to which it is integrated. The major integration is provided by various attempts to test Eysenck's related hypotheses: (i) that the introversion-extraversion dimension of personality is related, at the level of the central nervous system, to the excitation-inhibition balance, in such a way that inhibitory tendencies and excitatory tendencies are characteristic of the extrovert and the introvert, respectively, and (ii) that depressant drugs by increasing cortical inhibition and decreasing cortical excitation produce patterns of extroverted behavior. As unifying principles, however, these hypotheses are not entirely adequate, and as a result the volumes read somewhat like a collection of rather discrete findings. Why was the research on emotionality, and that on thought disorder, included in this work? For that matter, some of the measures of behavior, which are used in sections clearly meant to test the hypotheses, seem to have been chosen primarily because they are part of the stock of experimental psychology and only secondarily for their theoretical relevance.

Testing Eysenck's hypotheses yielded some confirming, but also some disconfirming and confusing, results. It is certainly true, as he indicates, that this outcome must be understood in