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## *Research Note*

### SOME OBSERVATIONS ON POLITICAL GAMING

By HERBERT GOLDHAMER and HANS SPEIER

**D**URING the past five years the Social Science Division of The RAND Corporation has been developing a procedure for the study of foreign affairs that we call "political gaming."<sup>1</sup> This article gives a brief description of the technique and some of our observations about its utility.<sup>2</sup>

#### I

Political gaming has antecedents both outside and within RAND. Prior to World War II, political gaming was applied to questions of foreign policy in Germany and Japan, although we were not aware of this at the time that we started our own experimentation.

Before Hitler assumed power in 1933, the leaders of the German Reichswehr were much concerned about Polish military strength and political designs. The German armed forces were then restricted to 100,000 men in strength. In 1929, a young staff officer, the later General Erich von Manstein, charged with the responsibility for the organization of a war game involving German defense against a Polish attack on East Prussia or Upper Silesia, realized that the outbreak of war would be preceded by mounting political conflict. In that conflict, he thought, Germany would have to avoid giving France and Czechoslovakia cause for entering the war as Poland's allies and the League of Nations a pretext for not declaring Poland the aggressor. Manstein proposed that the strictly military exercise be introduced by a political game in order to let political and military leaders learn from each other.

<sup>1</sup> This work was made possible in part by funds provided by the Ford Foundation.

<sup>2</sup> The Social Science Division of RAND has prepared a series of internal papers on gaming. Several of these have been made available to persons outside RAND who have expressed an interest in experimenting with the technique. Some of these papers are: H. Goldhamer, "Toward a Cold War Game" (1954); P. Kecskemeti, "War Games and Political Games" (1955); H. Goldhamer, "The Political Exercise: A Summary of the Social Science Division's Work in Political Gaming, with Special Reference to the Third Exercise" (1955); J. M. Goldsen, "The Political Exercise: An Assessment of the Fourth Round" (1956); Social Science Division, "Experimental Research on Political Gaming" (1958). The present article has incorporated some material from the papers listed above, particularly from the last-mentioned item.

High-ranking members of the Foreign Office played the roles of the president of the League of Nations Council and of the Polish and German Foreign Ministers. In his recently published memoirs, Manstein writes that the inventiveness of the player representing Poland in alleging German provocations left his German counterpart "completely speechless" and that the skillfully simulated procrastination of the League was grimly appreciated by all participants. "We had the impression also," Manstein reports, "that the gentlemen from the Foreign Office, to whom such a playing-through of possible conflicts seemed to be completely novel, were thoroughly convinced of the value of the game."<sup>3</sup>

According to exhibits offered in evidence at the Tokyo War Crimes Trials, the Japanese Total War Research Institute, established in 1940, engaged in games of aggression that involved having teams of high-ranking specialists in the Japanese government play the political and military roles of leading powers in the Pacific area. In these exercises Japan was represented not by one team, but by several—Army, Navy, Cabinet—and the views of these teams had to be co-ordinated before Japan as a whole could act. Some of the moves in this game anticipated actual measures taken by the Japanese government after Pearl Harbor.

From an article in the Sunday *Times* (London), December 9, 1956, it appears that the Soviets may have made use of a similar procedure. Alexandre Metaxas, who is identified as a Russian-speaking French journalist, reports that Soviet political specialists try to anticipate the results of international political moves by putting themselves in the role of each interested party in turn. Metaxas claims that the course to be followed by the Soviet Foreign Office is determined in part by the results of this simulated interaction. It is not clear from his account whether actual gaming procedures are involved.

RAND's interest in political gaming grew out of work in political analysis and previous experimentation with the use of gaming techniques for other purposes. For several years RAND has worked extensively with various sorts of highly formalized war games. At one point an attempt was made to devise a "cold war game" in which a few political and economic factors were assigned numerical values so that the relative worth of alternative strategies could be assessed quantitatively. Players were allowed only a limited choice of specified moves. This experiment was abandoned when it became clear that the simplification imposed in order to permit quantification made the

<sup>3</sup> Erich von Manstein, *Aus einem Soldatenleben*, Bonn, 1958, pp. 131-33.

game of doubtful value for the assessment of political strategies and tactics in the real world.

The first proposal for a political game of the type with which we have been working was made by Herbert Goldhamer in 1954.<sup>4</sup> He suggested a procedure that avoided schematic simplifications of the international political situation and attempted to simulate as faithfully as possible much of its complexity. The government of each country was to be represented by a separate player or group of players. (In practice, of course, all countries never were represented, but only those regarded as most significant for the geographical or problem area around which the game was centered.)

In addition, "Nature" was to be represented by an individual or a team, and there was to be a team of referees. The role of "Nature" was to provide for events of the type that happen in the real world but are not under the control of any government: certain technological developments, the death of important people, non-governmental political action, famines, popular disturbances, etc.

Participants in the game were to be area specialists who could draw on their knowledge and accumulated area experience.<sup>5</sup> With the exception of the American Team, all government teams were to act as they judged "their" governments would in the circumstances prevailing at any given time of the game ("predicted strategy"). The American Team was less restricted; it was permitted to pursue any strategy which it judged to be optimal; in particular, the United States Team was not required to follow the foreign policy line of any administration or to have special regard for the constraints placed upon American foreign policy in reality by domestic considerations. The game was thus designed to permit tests of a wide range of United States strategies.

The referees had the task of ruling on the feasibility of each move; that is, they were to disallow any move that they did not regard as within the constitutional or physical power of the government proposing it. For three reasons the referees also played the role of "Nature." This arrangement saved manpower; it restricted the number of arbitrary moves which might have been made had full-time players represented "Nature"; and it permitted the referees to make certain non-governmental moves which constituted indirect, partial evaluations of the state of affairs that had been reached at any chosen point of the game. For example, the referees could introduce such evaluations in

<sup>4</sup> H. Goldhamer, "Toward a Cold War Game" (1954).

<sup>5</sup> All players had spent some time in the country whose government they represented and were familiar not only with its political system but also with many members of its ruling groups.

the form of press roundups, trade union resolutions, intelligence reports, speeches made in the United Nations, etc. (The governmental players were permitted, however, to challenge the plausibility of such moves.)

In the course of 1955 and early 1956, four political games were played, starting with the rules suggested by Goldhamer and gradually developing additional refinements. The first two games extended over only a few days. The third game lasted four weeks in the summer of 1955, and a dozen RAND staff members devoted approximately half time to it. The fourth was conducted during the month of April 1956. Three senior Foreign Service Officers from the Department of State participated in the fourth political game, along with specialists from RAND's Social Science, Economics, and Physics Divisions. In the fourth game, unlike previous plays, all thirteen team members devoted practically full time to the exercise, one of them spending part of it on liaison functions. In addition, a number of consultants were called upon whenever the development of the game required competence in fields of which the full-time players did not have special knowledge. The players were assisted by a sizable secretarial staff. Prior to the start of gaming, considerable time was spent on the preparation of a "scenario" and "strategy papers."

Since the fourth game is by far the most exhaustive test we have given this technique thus far, the following observations refer primarily to it. One reference to the earlier games will, however, be useful in order to explain what is meant by the "scenario." In our first attempts at political gaming, we started with the historical present as a backdrop. From then on, game events moved into the future under their own momentum. It sometimes proved difficult to prevent the initial action in the game from being overtaken by or becoming entwined with developments reported in the daily newspaper. The fourth game, therefore, was projected further in the future, with the opening moves to be made as of January 1, 1957. The "scenario," written in March 1956, represented an effort to describe how the world of January 1, 1957, would look. It provided the players with a common state of affairs from which to begin. The scenario rid them of the intrusion of current news into the game and served to focus it on problems of special analytical interest.

In this game, as in the third, all moves by national teams were made in written form and submitted to the referees for clearance prior to distribution. The government teams were generally required to state (to the referees) the motives of their moves and the expectations on

which they were based. The referees could challenge not only the feasibility of the moves but also their plausibility or the reasoning behind them; and if the government teams so desired, the referees could be asked to state their objections in writing.

Some moves were "open" and available to all teams; others were "game classified." The referees determined the distribution of each paper and, as controllers of information, could "leak" the contents of "game classified" papers, in whole or in part, sooner or later, accurately or in distorted form; thus the referees served as surrogates for the intelligence function in the political process or for actual "leaks" of classified information in the free press. They did not act for the Communist press, since it is government-controlled.

Prior to the April 1956 session, the government teams drew up strategy papers. These were "game classified" and were distributed only to the referees. Also certain parts of the scenario were "game classified"—e.g., sections containing descriptions of certain weapons developments.

During the three weeks of actual play, 150 papers were written by the participants. Many of these consisted of moves by government teams; moves were dated in "game time" and numbered sequentially with reference both to the action of each team and to the game as a whole. "Game classified" background papers served to give the referees a basis for judging the motivation of any given move, and to provide a written record of the analytical thought relating the move to the strategy paper of the actual team.

The fourth game was focused on the activities of the United States and the Soviet Union with respect to each other and to Western Europe. In the first week some major activity did develop involving the Middle East and some minor activity involving North Africa and Asia. But on the whole these areas received secondary attention because of limitations in time and a determined effort to keep the game focused (and not because of an *a priori* judgment about the political importance of these areas).

Events of the game carried well into the summer of 1957 (game time). After three weeks of play, the complete set of records was thrown open to all participants, including the strategy papers and all other "game classified" documents. Time was allowed for the study of these papers, and then a few days were devoted to meetings of all participants to assess and evaluate the game.

In short, the game was so designed as to meet six main requirements:

(1) *Minimal formalization*: The government teams were not lim-

ited to any prescribed set of moves, as is the case in a game like chess and in some war games; nor did the game contain any pre-established prescriptions automatically entailing certain consequences from particular types of moves.<sup>6</sup> Such formalization would beg many questions that we regarded as the proper subject of discussion and inquiry within the exercise itself or as resolvable only by research outside the game. Rather than work from highly simplified and schematic assumptions up to a richer and more complex game world, we followed the opposite approach.

(2) *Simulation of incomplete and incorrect information*: In foreign affairs, state secrets, which all governments keep with varying degrees of success, are important obstacles in the process of decision-making. In our game the introduction of "game classified" moves and their unpredictable handling by the referees tried to take account of this factor.

(3) *Simulation of contingent factors*: In political life many events are beyond the control of the most powerful actors, a fact designated in political theories by such terms as *fortuna*, "chance," "God's will," "changes in the natural environment," etc. We tried to simulate this fact by moves of "Nature."

(4) *Plausibility of game events*: We vested insurance against implausible game events not only in the political judgment of the referees but also in that of the participants responsible for governmental moves. We found no tendency for politically knowledgeable and responsible players to invent "wild" moves in order to relieve the tedium of the often slow and deliberate maneuvering of the governments involved in the game. Indeed, we found that some players in their desire to behave responsibly were at times unnecessarily cautious in their moves. We believe that continuing participation in political games resolves this difficulty.

(5) *Clarification of issues*: Our aim was not to move on rapidly from point to point of the game but to clarify by discussion the issues raised in the course of the play. Such discussions took place during the game within each team before a move was proposed or on occasion between a government team and the referees, and after the game among all participants. Furthermore, we directed effort toward the clarification of intellectual issues by providing a focus of the game in the scenario and the strategy papers, by restricting the number of teams participating full time, and by selecting highly qualified specialists as players.

(6) *Exploration of novel strategies*: We tried to stimulate efforts to

<sup>6</sup> In war games, these prescriptions are called "planning factors."

meet this requirement by prescribing "predicted" and "optimal" strategies respectively to various teams in advance of the play.

## II

The Social Science Division has carried on several discussions to assess whether the game procedure is worth the substantial investment of time and energy that it requires. The immediate stimulus to the Social Science Division's venture in this field was the difficulty of deriving from the results of research and from general political and military knowledge a sense of the probable trend of future international affairs and the most likely consequences ensuing from policies and military postures that might be adopted by the United States or other countries.

Evidently the principal difficulties here are those inherent in scientific and applied scientific work, especially in the social sciences. Any basic improvement in our ability to forecast the consequences of an actual or hypothecated change in the political-military world will surely depend on advances in our theoretical and empirical knowledge. Granted this, there still remains the problem of making the most effective use of any given level of empirical knowledge and theory. In this connection the political game was primarily envisaged as a means for securing a more effective collaboration of the specialized skills involved in political-military analysis. The political game provided an easily and sharply defined division of labor for the participants, and it gave them a more systematic means of adjudicating the conflicting claims of different lines of argument. It also demanded of them extensive and explicit statements of the political and military assumptions from which they argued. In these ways it helped the participants to achieve a more effective co-ordination of the knowledge and intellectual talents at their disposal. In addition the game provided, through its sequence of moves and countermoves, a "calculation" of consequences (anticipated and unanticipated). In this respect the political game is somewhat similar to the use of Monte Carlo methods, whereby machine simulation takes over the job of a purely mathematical derivation of results.

It should not be supposed, however, that the political game displaces customary forms of intellectual collaboration such as the writing of political analyses, by individuals or jointly, and seminar-style discussions. On the contrary, we found that one of the most useful aspects of the political game was its provision of an orderly framework within which a great deal of written analysis and discussion took place. In describing our experience to others, we have continually emphasized

that oral or written discussion of political problems that arise during the game is one of its most valuable features.

Making effective use of a given level of knowledge and theory does not, of course, preclude advancing knowledge and theory through gaming. While obviously such benefits will vary from player to player and from problem to problem, participants in our games did find opportunities to check their suppositions, both of a factual and of a more theoretical character, against the game events. It is not easy, however, to derive these benefits, and we suspect that they often get lost in the process of playing the game. A critical and self-conscious effort is needed to retain these benefits in a more lasting and transmissible form.

We did not expect and we have not so far found that the political game enables us to test strategies or to forecast political developments with any real degree of confidence. Unlike a written analysis, however, the game does provide some testing of a strategy prior to the test made by history itself (if that strategy is indeed followed in the real world). However, the political analyst working in his study "controls" not only the political maneuver he is analyzing but also the responses of hostile, neutral, and allied countries. In the political game, the analyst must contend with responses made by other players and not those which he assumes will follow from the line of action he is proposing. In a fairly comprehensive political game, there are numerous plausible alternative moves that governments may make, and the one line of many branching lines of development pursued in a single game cannot usually be accepted as an adequate test. To test strategies and to forecast political developments would require several replications of the gaming problem. This we have not yet attempted. On the other hand, our experience does show that even though an over-all strategy may not be tested (in terms of a clear payoff) by a single game, players do become aware during the game of pitfalls and problems that surround a strategy or some aspect of it.

The requirement of the political game that the participants make definite acts on behalf of their governments provided a very real stimulus to political inventiveness and a keen realization of possible contingencies that in analytical work might have seemed less important or less likely. On several occasions in our fourth game, certain developments in the game suggested the need for particular types of contingency planning in the real world or anticipated events that did occur later.

We hoped that the political-military questions arising in the game

would indicate problems for further research and that gaming would thus help to shape our research program. This proved to be the case, but probably the major benefit lay in the fact that the game served to suggest research priorities for problems of which we were already aware and to define these problems in a manner that would make the research more applicable to policy and action requirements.

We believed when we began our work in gaming that the political game would prove to be a useful educational device. Our experience (and that of academic institutions with which we have collaborated) has increased our conviction in this regard.

First, the political game provides a lively setting in which students of politics, acting as observers or apprentice participants, can learn a good deal about the structure of the contemporary political world and about some of the reasons behind political decisions. Factual information takes on a new interest and importance when it is required for intelligent participation in the game, and political principles assume special significance when they are illustrated by political actions and situations with which the student is associated as a participant. Needless to say, these benefits are realized only if the students receive continuous criticism from politically knowledgeable persons or participate in a game with such persons.

Secondly, the political game performs an educational function also for individuals with considerable political training and knowledge. We found that the game provided excellent opportunities and incentives for such participants to acquire an overview of a political situation and to amass relevant information that the ordinary intellectual division of labor and specialization by area or discipline do not make available. Some players found that they were exploring new fields of knowledge, some of which they had not previously associated with the conduct of foreign policy, such as developments in weapons technology. Area specialists were not infrequently made more keenly aware of the specific ways in which the world outside their area of specialization affected the politics of countries within their area.

A third educational benefit of the political games we played was to give players a new insight into the pressures, the uncertainties, and the moral and intellectual difficulties under which foreign policy decisions are made. This, of course, is in part a tribute to the earnestness and sense of responsibility with which the participants played their roles, since otherwise these pressures and perplexities would not have made themselves felt.

## III

Even before the first four games had been completed RAND began to receive requests for information about its political gaming procedures, and staff members have by now taken part in a substantial number of discussions about it. In the summer of 1956, Hans Speier presented a summary of our experience as of that date to a Social Science Research Council summer institute in Denver, and in 1957 to the Fellows at the Center for Advanced Study in the Behavioral Sciences at Stanford. On several occasions during 1956-1958, Herbert Goldhamer lectured on the political game at the Army War College, and Joseph Goldsen discussed it at faculty and student gatherings at Yale and at a conference sponsored by the Carnegie Endowment for International Peace at Princeton. Informal discussions about political gaming have been held with personnel of the Department of State, the Center for International Affairs at Harvard, the Brookings Institution, Northwestern University, and the Massachusetts Institute of Technology. In June 1959, the Social Science Research Council held a conference at West Point, N.Y., on teaching and research in the field of national security. At one of the sessions Hans Speier described the RAND experiments in political gaming, and several social scientists from various academic institutions, including all those mentioned immediately below, reported on their own experiences with such games. Finally, in September 1959, Herbert Goldhamer presented a paper on political gaming at the annual meeting of the Political Science Association in Washington, D.C.

We have not attempted to collate the experiences other institutions have had in using political gaming techniques derived from the RAND experiments or worked out independently.<sup>7</sup> Such a collation might be useful at some future time.

Because of RAND participation we do, however, have rather detailed information about various experiments with political gaming at MIT. During the academic year 1957-1958, W. Phillips Davison of the RAND staff served as visiting professor at MIT, and while there tried out political gaming in his graduate seminar on international communications. This game was conducted according to greatly simplified rules. Players sat around a large table and could make their moves orally, although a fairly detailed written record was kept. The instructor acted as referee and "Nature."

In spite of the limitations imposed by the simplified procedures

<sup>7</sup> Work in this area at Northwestern University is partially summarized in a paper by Harold Guetzkow, "A Use of Simulation in the Study of Inter-nation Relations" (mimeographed).

and the brief time available, Davison concluded that the experiment achieved worthwhile results from an educational point of view. While it did not approach the realism of the RAND games, it showed that even with less expert players the game could provide real benefits. Perhaps the most outstanding of these was the intense interest generated among the students. When formal gaming came to an end, students continued the game at lunch and at other informal gatherings. A related benefit was the increased sophistication with which students approached their research problems.

Later in the same year Professor Lucian Pye—also at MIT—assisted by Professor Warner Schilling (now at Columbia), adapted the RAND technique to the requirements of his course in American diplomacy. During the term each student was asked to write a paper setting forth the major foreign policy goals of some country and to outline a foreign policy for achieving these goals. Then, during the last four meetings of the course, political gaming was conducted, with students taking the parts of the countries whose foreign policies they had discussed in their term papers.

This experiment appeared to be a highly successful pedagogical enterprise. In many cases students found that the foreign policy they had constructed in their term papers proved unrealistic when they attempted to follow it in the game. The game thus provided a means of obtaining critical insight into their own previous thinking. Both Pye and Davison have noted that political gaming, when conducted with students, places a very heavy burden on the instructor (who acts as referee and “Nature”).

A further use of the gaming technique at MIT was made by the Center for International Studies, in connection with a research project on the United Nations headed by Professor Lincoln P. Bloomfield. One session took place in September 1958. Several RAND staff members discussed the plans with Professor Bloomfield, and the informal records on RAND’s gaming experience were made available to him. Paul Kecskemeti of the RAND staff participated in this game. Professor Norman J. Padelford, also at MIT, has since organized various other games for undergraduate students, in some of which political scientists from other institutions have participated.<sup>8</sup>

We believe that there are a great many political questions and questions of technique that could be clarified by more work in political gaming, but that this should not lead to a neglect of customary research

<sup>8</sup> For one of these, cf. Norman J. Padelford and Seth P. Tillman, “Report on Political Exercise on Berlin Crisis,” January 1959 (mimeographed).

and study. Gaming is most productive if one is able to bring to it the results of continuous research in the field of foreign affairs and weapons development.

#### IV

In conclusion we are setting forth a few variants in the form and content of the game that any thorough exploration of this procedure ought to test.

(1) *Time*: In our experiment the initial scenarios with which the games began still resembled reality rather closely. The effect of more extreme deviations from current political and military reality in the game remains to be tested. For example, the character of the game might be strongly modified by a scenario in which NATO had been dissolved, various national states in addition to the present three nuclear powers were in possession of nuclear weapons, and the political leaders of the major powers of the world were replaced by unknown persons. Such a game, removed from immediate political reality, could conceivably lead to the discovery of entirely new problems and to new insights and provide a greater emphasis on analytical results or generalizations. It might also be of interest to play games covering *past* history.

(2) *Tempo*: While the groups involved in the exercise at MIT played the game in rapid-transit fashion, this procedure has not been tried out by senior players. The best "tempo" of the game remains to be determined.

(3) *Replication and variant strategies*: Fast games would lend themselves especially well to replication, and without replication certain results of the game cannot be validated. Alternatively, it would be desirable to have two or more sets of teams play simultaneously a game with the same scenario,<sup>9</sup> or else to begin a single game with sufficiently large teams so that they could be split to explore branching strategies when important alternative continuations develop at any stage of the game.

(4) *Predicted vs. optimal strategies*: Our own experience has been largely, though not exclusively, based on allowing the United States Team to pursue any strategy it deems optimal, but requiring other government teams to pursue the strategies to be expected of them ("predicted strategy") in the given circumstances of the game. More experimentation would permit games in which the United States plays ex-

<sup>9</sup> Since this article was written, such an attempt has been made on the undergraduate level in three institutions—Columbia University (Warner Schilling), MIT (Lucian Pye), and West Point (Major Abbott Greenleaf).

pected strategies and other governments optimal strategies, or in which all governments play expected strategies or all governments play optimal strategies.

(5) *Scope*: There are a number of variants to be explored in which the scope of the game is changed so as to encompass smaller or larger political-geographical areas or more or less specialized policy problems. It is possible that the value of the game to students increases when its scope is enlarged, while the inverse relation may exist regarding the value of the game to decision-makers. The latter, however, will want some assurance that specialization of the game problem does not obscure important side effects of the policies involved in the game.

(6) *Political behavior*: The game offers opportunities for studying problems other than policy choices and their consequences. For example, by simulating international conferences within a given game (which we have tried on occasion), additional data can be developed for the study of negotiatory behavior. To be sure, special arrangements toward this end for observation and recording have to be made in advance. Similar opportunities exist with regard to the study of, and training in, specialized political and economic warfare problems, the drafting of diplomatic notes, the study of the effect of uncertainty and stress upon decision-making, and a host of other problems that arise in the conduct of foreign affairs.

(7) *International participation*: It would be desirable to have a few foreign political analysts play the roles of their own governments so that close consideration of each nation's interest would be increased. (Teams representing Communist governments could be composed of both American and foreign specialists.) It is to be expected that such a game, if carefully prepared, would substantially enhance among all participants the understanding of national "bias," collective security, the nature and problems of coalitions, and the viewpoints of neutrals.