

CONCLUSIONS

Cursory Review

This essay began with a critique of some rather simple game models. While these models definitely have useful applications, the strategy formation process in international crises was felt to lie beyond their boundaries of relevance. The case studies have demonstrated this rather clearly through the absence of the ideal types of strategy which derive more or less deductively from such models. A greater concern, however, has been the delineation of models which are more congruent with the strategy formation process. A series of general suggestions was developed earlier, and these suggestions were found useful in the analysis of a pair of crisis cases. I want now to tie the rather loose ends of these suggestions together somewhat.

The crux of the matter lies in the manner of situations with which actual decision units must deal. The information conditions which exist simply do not support the decision process which game theory players go through. Here the work of Simon (1955) and others (Cyert & March, 1963) is quite useful in delineating a decision process far more isomorphic to that of actual decision units than the process of game theory. Essentially decision units are confronted with a problem of several dimensions to which a satisfactory solution must be found. In crises this generally entails manipulating an adversary to give up some source of value. A satisfactory solution is marked off by several discrete and independent boundaries. These boundaries may be viewed as differentiating situations of Prisoners' Dilemma from those of Chicken. The process of gaining a

satisfactory solution which I have termed managing the situation involves searching for options which maintain the consequences within the Chicken area on all the various constraints which arise.

The reason for dwelling so with the nature of the internal decision process is that this process gives rise to particular strategy formation tendencies which differ from those derived from the simple, albeit innovated, game models of Schelling. These latter models allow the use of a decision process from which Schelling (1960) deduces a series of ideal type mechanisms. Later Schelling (1966) notices that these ideal types appear only very imperfectly in actual interaction among national decision units. The claim then that Schelling's mechanisms fit the activity of international crises rather poorly is hardly original. The explanation of why the fit of these ideal types is so poor and the development of a more congruent alternative--which I think are original--are in part dependent upon a new understanding of the decision process internal to the units, however.

The situations which decision units face in international crises are quite amorphous, and the situations are actually constructed or specified by the decision process which is used. Generally the clearest areas in the beginning are the decision units own Prisoners' Dilemma boundaries although even these may be reevaluated over time. There exists a vague peace-war dichotomy which resembles a fuzzy, two alternative game matrix. This dichotomy normally presents the parties with rather stark choices. Failure to tangle with the adversary and thus opting for peace in the present situation may mean defeat on the immediate issue as well as

ordering options on a single dimension or the entry of new options at

situation leaves them in the irrelevant past. Practical problems such as

some existing alternatives will wither, so to speak, as the changing

new options may be inserted to break down particularly stark choices and

a strategy represents a sequential choice of several action alternatives.

modeled as an open, expanded, normal form game matrix. In such a matrix

hazards of the original choices. Abstractly this process can be usefully

a variety of general options which can be undertaken in order to avoid the

by the beach (humiliation)-war dichotomy. This is done by searching for

Generally the first step is to expand the range of choice presented

such a situation.

however; here what is important is how decision units go about handling

situation. I have been over these and other possibilities before,

even lead to the loss of a deliberative or bargaining approach to the

its preferences and perhaps to escalate the situation. Provocation may

relatively useless. Provocation may cause the adversary to reevaluate

may enter the situation which will make option eliminating commitments

perspectives of national decision units. New alternatives and consequences

international crises is unfortunately a good deal less clearly in the

Schelling does not consider the party which falls in this endeavour.

assure themselves the payoffs they desire--that is, one party can do this;

Schelling shows, they can foreclose all action options except one and

There players are blessed with sufficient information so that, as

Decisions of this type do not bother the players of game theory.

ground may mean war.

humiliation and an increasingly dangerous future. Yet standing one's

new
+ old

various points in time have frustrated my efforts to concretely model an actual crisis situation in any elegant fashion. But ~~an~~ an abstract level this model does generate a pair of concepts useful to the explanation of strategy formation and generally congruent with the implications of Simon's internal decision process model. These notions are the expansion of the choice spectrum through a problem oriented search and the formation of strategy incrementally or a step at a time.

This notion of strategy is alien to the models mentioned earlier. In these ^{plc} multiple decisions could be collapsed into pre-planned strategies. Thus Schelling (1960, pp. 150-158) is able to reduce the expanded, normal form matrix to fit his paradigm. What ^S Schelling cannot integrate into his paradigm is an open situation. As Kahn (1965) shows, under open circumstances fear of disaster prompts a search for a series of options which provide a cushion between the parties and disaster. Also, existing alternatives may become irrelevant as the situation changes or passes them by. The choice of an alternative at any given point in time is guided by the nature of the problem at that time. As the problem changes with time different options are sought and chosen in the management of the situation.

The open situation actually alters or adds another variation to the meaning of commitment--Schelling noted this briefly in 1966 (p. 48). Commitment in such a situation is defined in terms of boundaries on the tolerable state of affairs. The areas of Prisoners' Dilemma mark off the commitment for each decision unit. The idea is that no decision unit will stand by idly while another party challenges one of the ^{sc} domains. The problem is most severe when the commitment domains of the parties

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 overlap. In this instance both are in great danger of being locked into an escalation sequence quite similar in the abstract to the lock-in which occurs in iterated sequences in experimental gaming (Rapoport & Chammah, 1965). The reaction which national decision units seem to have to a situation of this nature is to find some means of signaling the problem to the adversary. But in the cases I have studied this signaling does not involve the elimination of all but one alternative; rather it attempts to physically impede the adversary's progress toward his objective. This then forces the adversary to take notice of the signal which is designed also to facilitate the use of further alternatives to extract the parties from the dangerous situation.

In the Cuban crisis the Soviet Union, for instance, challenged a United States commitment or Prisoners' Dilemma area with its first move. The problem then for the United States was to signal this to the Soviet Union in a manner such that the signal was simultaneously credible and yet not provocative to the point that the Soviet Union's own commitment areas would be violated. The United States hoped to preserve other alternatives particularly deescalatory ones by keeping the Soviet Union's commitment areas inviolate. In the Agadir crisis an overlap of commitment areas was less imminent, but through some crucial misperceptions the Germans, then the French, and finally the British perceived the adversary as threatening their areas of commitment. These parties thought at one point or another in the crisis that they were in a Prisoners' Dilemma situation.

It is through the concept of the super game that many of these areas of Prisoners' Dilemma develop. There may be a few issues which are so

important in there immediate costs as to develop such a preference structure, but ~~any~~ instances need the considerations of the supergame to reach this state. When mutual defection is a step on the slippery slope to nuclear destruction it is perhaps surprizing that any issue raises Prisoners' Dilemma rather than Chicken choices. But in fact the supergame incorporates the cost of war into the payoff for exploited cooperation. The costs of exploitation here are not limited to the immediate issue at hand. Rather the impact of a party's showing in the conflict over the immediate issue is considered as an indicator about the severity and frequency of future contontations. There seems to be considerable feeling among national decision units that a weak showing of exploited cooperation in the present conflict is constly in that the severity and frequency of future conflicts will increase. Thus, through the supergame, the costs of war or mutual defection are not avoided by allowing oneself ~~to be exploited by the adversary's defection~~ but are rather only delayed.

The supergame is an important concept also from the aspect of explaining why risk mainpulation tactics similar to those in Schelling's scenarios are not in common use. These tactics appear to be rather provoking through the humiliation which they generate, but Schelling is rather asymmetrical in his treatment of provocation. He delineates carefully how an informal counterpart of the supergame may be important to one side, but he largely ignores the possible impact of this concept on the other side. To some extent Schelling may be justified in this with respect to any single commitment area or issue. The United States, for instance, war far more concerned to keep Soviet strategic weapons

out of Cuba than the Soviet Union was to have them there. In the case of Agadir France was more anxious to keep the Germans out of Morocco than the Germans were to be there. The supergame considerations on these issues were lined up asymmetrically behind the United States and France. All this Schelling explains.

What he ignores is that there are other issues. The Soviet Union claimed that an invasion of Cuba or the boarding of Soviet ships on the high seas would violate commitment areas of the Soviet Union. There is, of course no evidence presently available to substantiate this commitment comparable to that which supports the existence of the United States commitment in this case. Yet such a commitment was credible for Kennedy even before the Soviets attempted to signal one. Kennedy could understand that, just as the United States could not allow Soviet strategic weapons in Cuba, the Soviets could not allow the destruction or humiliation of their forces in the Caribbean area. Kennedy may have been in error here on the boundary of the Soviet Union's commitment zone, but the general point still stands. There was some provocation which the Soviets could not have taken passively. It might have been the boarding of Soviet ships or it might have been ~~the boarding of~~ a general nuclear attack upon the Soviet Union, but there were issues which lined supergame considerations up asymmetrically on the other side as well. Kiderman's response to Caillaux's "eight days" threat is an example of this. The Germans might not stand as fast on compensation in Morocco as the French, but they were not going to be pushed around in any manner the French pleased either.

The three primary sources of innovation--the internal decision process of Simon, the dichotomy diffusing search and incremental strategy

development of the open, expanded, normal form matrix, and the payoff structures created by the considerations of the supergame--all tend to indicate a style of bargaining somewhat more flexible and cautious than that which develops from the simple models from which Schelling deduced his ideal types. These tendencies were considerably more marked in the analysis of the Cuban and Agadir cases than Schelling's ideal types of which some appear rarely and others not at all. I want to attempt to order these implications as coherently as I can now.

Implications

In their study of experimental Prisoners' Dilemma Rapoport and Chammah (1965) ran experimental trials of several hundred individual plays. The pattern of mutually cooperative responses over time which these experiments developed varied somewhat with a variety of formal parameters. Basically, however, the pattern resembled a U-shaped curve. The players started cooperatively; resistance to the temptation of defection weakened and intermittent defection occurred; defection became more common and lock-in was reached; finally the players began slowly to work their way back toward mutual cooperation.

While in any concrete fashion these experiments differ quite markedly from international crises, there are at least a pair of abstract similarities which are of some relevance to the process of strategy formation in international crises. One of these is the break down of the trials into a large number of iterations. The other is the pattern of play under these conditions. I have to admit the largely speculative character of any analogy here. For one thing crises are not always

situations of mutual Prisoners' Dilemma. One party or another remains within the Chicken boundaries on some constraints a good bit of the time. Another problem is the absence of any elegant means of displaying the action patterns of international crises. Yet the similarities remain interesting. Rapoport and Chammah could have had their players engage in a single iteration of some form with payoffs similar to those covered by an entire trial and with an opportunity for pre-play communication. This would be a Schelling situation, and one would expect his ideal types to emerge from this game. In the iteration experiments, however, the payoffs are broken down into hundreds of incremental segments. The decisions made on the past several plays are used by each player to predict future plays. Lock-in here represents an escalation sequence with each player getting further behind on each iteration.

In a speculative manner this process may be transformed onto an imaginary expanded, normal form matrix which has an overall payoff pattern of Prisoners' Dilemma. Not all comparisons within the matrix are Prisoners' Dilemma, however. A substantial minority, particularly those located near the main diagonal are of the Chicken variety. Movement down the main diagonal represents escalation or lock-in. The parties can and do develop new alternatives between their present positions and disaster--the lower, right-hand corner. The U-shaped activity model transposed onto this matrix would involve starting at the upper, left-hand corner. Then defections would occur moving either to the right or downward and removing the action from the main diagonal. These defections would eventually be countered, and an escalation process

along the main diagonal would take place. Finally efforts at deescalation would begin and the action would move back up along the diagonal.

In the abstract the analogy is quite tempting. Unfortunately it is not very easy to represent actual crisis situations in the expanded, normal form. However, as I have mentioned above, the analogy does generate some notions which are useful in analysing the strategy formation process. To call these notions counterparts to Schelling's ideal types would, at present, be rather pompous. They are as yet too vague, and they lack coherence. But they are a beginning for the formal representation of the strategy formation process.

I think the key word in differentiating the formation of actual strategy from Schelling's ideal types is caution, and caution manifests itself in a number of forms. Schelling's players are willing to risk all on a single move. National decision units generally want more of a cushion for error. They like to reduce uncertainty by feeling their way through the strategy process rather than by leaping into the void. The basic means here is incrementation and one of its purposes is the maintenance of freedom of action. Thus, if unanticipated and undesirable consequences arise from a particular course of action, incremental action development allows for corrections to bring about more desirable consequences. This maintenance of freedom of action is, of course, diametrically opposed to the essence of Schelling's ideal types which are based on the foreclosure of all but one alternative.

Incrementalism appears in several variations in crises. The most obvious and important is the break down of the strategy process into a number of sequential decisions. This tendency violates Schelling's

race-to-commit paradigm in both its simple and complex forms. Sorensen provides an excellent discussion of this when he explains the inadequacy of a letter to Khrushchev as a den~~ial~~ move (Sorensen, 1965, p. 772). This means would lack credibility for one thing. Just as experimental players begin to cooperate again through the experience of mutual defection; Sorensen thought the Soviet withdrawal would be won by a series of escalatory actions on the part of the United States which would convince the Soviet Union that deescalation was desirable. The provocation involved in such a letter was important too, but this will be discussed a bit later. Another consideration which mitigates against the ideal types of Schelling is the open situation. Strategies cannot be developed for contingencies yet unforeseen. Incrementing strategies into iterative decisions facilitates the management of a changing situation.

The individual steps of the overall process demonstrate incrementalism as well. A prominent style of incrementalism at this level is the stepwise implementation of general decisions. Kennedy, for instance, spend the better part of four days implementing the blockade after it had been announced. He justified it, attempted to increase its constituency, decreased its radius, and then finally initiated it on a carefully selected, non-Soviet ship. Kiderlen too used this tactic. Two weeks separated his signal of the necessity of compensation and his specific demands. This period included also Kiderlen's initiation of the territorial exchange notion.

Another form of incrementalism which will be discussed more thoroughly a bit later is incremental shifts in the character of policy. Crises are generally considered to be situations which change so swiftly and

dramatically that there is little room for incrementalism of this variety. It is certainly true that dramatic changes occur in crises-- the shift from quiescence to denial or from confrontation to breakdown, and these can hardly be construed as incremental changes. Yet within stages shifts in policy are commonly made in an incremental fashion. The steps which the United States decision unit contemplated for bridging the escalatory jump between the blockade and the air strike provide examples of this.

There is a parallel consideration which prompts these forms of incrementalism. Caution involves not only maintaining freedom of action but controlling provocation as well. There are two very basic considerations which Schelling's ideal types largely ignore. One is that an action may be so provoking that the deliberative, bounded rational bargaining perspective may be lost altogether. Another problem more closely related to this essay is that provocation may engage enough value to violate a commitment or Prisoners' Dilemma area.

Examples to support this concern parallel the types of incrementalism discussed under the maintenance of freedom of action. The argument for the blockade was enhanced because certain members of the United States decision unit felt that an air strike or the threat of one would provoke a violent Soviet response or intransigence respectively. These men thought that the blockade was a credible yet less provocative means of signaling the necessity of Soviet cooperation in the removal of strategic weapons from Cuba. Here then strategy was broken down into several smaller moves or decisions rather than risking all on one giant move.

The incremental implementation examples of the earlier discussion still stand here. Kennedy was extremely cautious in implementing the blockade. He wanted the Soviets to become accustomed to the blockade before moving further; he wanted to give the Soviet decision unit time so that whatever mitigating influence deliberation might have would have time to operate; and Kennedy wanted so to avoid specific incidents which might cause severe provocation that he attempted to delay them. Kiderlen, although somewhat less empathetic, felt the same concerns. The announcement of the Panther's move came on July 1. Then on July 9 Kiderlen suggested the idea of the territorial exchange. His groundwork laid, Kiderlen revealed his offer or demand on July 15.

The alternatives with which the United States decision unit sought late in the confrontation stage to bridge the blockade-air strike gap are excellent examples of ~~incrementalism~~/^{to} incremental policy changes arising from the fear of provocation. Although the blockade and the air strike were both steps of a single policy, several United States decision-makers recognized that these steps might be significantly different from the perspective of the Soviet Union. The response was to attempt to develop a cushion of new alternatives between the two in order to avoid the provocation associated with the air strike.

Another common manifestation of caution associated with both the maintenance of freedom of action and the avoidance of provocation is vagueness. Schelling's commitments involve the height of specificity arranged by the foreclosure of all alternatives except one. There is a common counterpart to this specificity in actual crises. It involves delineating commitments or Prisoners' Dilemma areas in terms of states

of affairs as clearly as possible. In crises, however, issues, as Schelling himself notes (1966, p. 48), are generally clearer than actions and specific signals about contemplated activity are quite rare. There is a commonplace notion that vagueness allows the use of ^{loop} ~~ap~~holes or avenues or retreat without generating the humiliation associated with specific, public retreats such as the Soviet withdrawal from Cuba. More importantly vagueness may make loopholes far less necessary. The Mansion House speech was vague enough ~~that~~ the British government felt it possible to attempt to soothe Anglo-German hostility in the week immediately following the speech without humiliation. The Germans reciprocated in this effort, and this would have been difficult for them had the speech been as specific as Caillaux's "eight days" ~~speech~~ threat. Specificity tends to reduce the freedom of action of the signal initiator and to arouse the recipient through provocation.

Almost any physical activity involves specificity of some sort. The United States obviously had a ~~fleet~~ of ships blocking the Atlantic approaches to Cuba. The Panther ~~was~~ definitely anchored at Agadir. The specific ~~meaning~~ of such actions is perhaps less clear. Would the United States vessels fire upon Soviet blockade runners? Would the Panther defend the harbor at Agadir? The Soviets and the French apparently thought the likelihood of these events to be high enough to take seriously. This is part of the inherent credibility of physical actions I have mentioned before. Physical moves are obvious enough that effectively recalling them brings about severe humiliation. Loopholes in other words are difficult to arrange.

Generally verbal signals do not carry great specificity. The discussion above explains why--maintenance of freedom of action and avoidance of provocation. There are two examples to the contrary in the cases I examined. Robert Kennedy's warning to Dobrynin on Saturday evening is one. This was given in a situation in which the United States apparently would not search for a loophole. Gaillaux's "eight days" threat is the other. This was a bluff which the Germans wasted no time in calling.

When specificity--commonly in physical actions or in terms of pre-crisis verbal signals--is used in a reciprocal fashion retreats and thus reevaluations become necessary. Prudence seems to suggest that these will be less noticed the vaguer expectations exist to begin with. The Soviet withdrawal in Cuba is a classic example of the situation everyone wants to avoid. Here an operationalized move was reversed in full public view. Generally specificity of this sort is not signaled to the adversary or it is built up incrementally. This example was not in fact signaled by the Soviet Union but was discovered prematurely by the United States. In addition the deployment of strategic weapons was the final increment in a larger Soviet arms program. The Soviets seem to have misread the feedback on their earlier increments and thus misjudged the significance of the offensive-defensive distinction for the United States.

In contrast the United States reevaluation of striking the SAM system in Cuba if a United States plane were shot down was no source of humiliation since the original contingency plan was known only to the members of the United States decision unit. Here no loophole was needed. The French reevaluation of compensation to Germany was not humiliating until the Panther intervened largely because the earlier French position

had been so very vague. A loophole here was unnecessary but would have been easy to contrive. One of Kiderlen's problems in reducing his compensation aspirations from the July 15 level was that the French foreign office had leaked an edited version of these demands and thus made the early German position common knowledge.

There is another implication of the models I have used. In this instance ~~it~~ rather than diametrically opposing the characteristics of Schelling's ideal types it actually reinforces a characteristic which appears in rather a simple form in Schelling's work. The consideration is initiative. In Schelling's models this is reduced to a race for first move. An open situation reduces somewhat the importance of first move since new alternatives to circumvent any given commitment may be sought. Initiative as a term for structuring a situation to one's own advantage is still an important factor, however. The desire to preempt the Soviets with an unexpected situation was obvious in the deliberations of the United States decision unit.

Kiderlen wanted to do the same sort of thing. His idea was that Germany would shatter the French plan of gliding into control of Morocco by holding a southern harbor or harbors as ransom. Germany, having thus cleverly preempted the French move could ^{ei} leisurely await a compensation offer which the French would have to put forward in order to continue their penetration of Morocco. This plan failed on several counts, however. One of these was that the French were sufficiently secure in the position provided by their early initiative that they did not feel the necessity to take the initiative again until Germany had generally agreed to compensation acceptable to the French.

In summary the ideal types which Schelling derives from the simple game models he uses are pretty inadequate as representations of the strategy formation process. In essence they represent specific, dramatic, and inflexible responses to familiar and unchanging situations. The models suggested in this essay ~~show~~ indicate vagueness for Schelling's specificity, caution for his leap into the void, and flexibility for his rigidity. In general these considerations describe crisis activity more accurately than Schelling's work does.

There are, however, at least three positive comments which ought to be made about Schelling's ideal types. First, his models may characterize what some decision-makers will do all of the time. There appear to be individuals present on many decision units who largely disregard the need for caution, flexibility, and vagueness. This, of course, would probably lead to disaster if two groups dominated by individuals of this approach ever confronted one another. It appears that these individuals are not in general dominant in national decision units, however.

Second, Schelling's models may well represent what all decision-makers will do some of the time. In his complex form (1960, pp. 150-158) Schelling is pretty clearly at variance with actual activity. However, on individual moves, the ideal types which Schelling ~~the~~ suggests sometimes have relevance for the method of gaining credibility. Robert Kennedy, for instance, used the technique that, if the Soviet Union would not agree within twenty-four hours to remove its strategic weapons, there was only one alternative left for the United States. This was not the general method of gaining credibility, however, which was to break the commitment down into a series of steps and to ~~the~~ implement some of them.

Third, and perhaps most importantly, Schelling provides a benchmark in the form of a series of elegant ideal types. One can then assess the congruence of these forms with actual activity and go about improving them. They provide a concrete and parsimonious place to begin.

A Model?

The implications of the last section are important in that they rather directly contradict the principles of Schelling's ideal types. They are unfortunately not as easy to use. The models from which they were derived are multiple and various, and no clear ideal type has been derived from them. The models then have helped to gain congruence, but they have done so at a considerable cost in parsimony. I have had to speak in terms of a dubious analogy with Rapoport and Chammah's experiments and a largely imaginary expanded, normal form matrix. The implications would be far more valuable if they were buttressed in terms of parsimony by some model of activity. I think the stage notion mentioned earlier may be of some use here. Its usefulness--which is limited in comparison to Schelling's ideal types--derives from its ability to display a pattern of characteristic action which differs as a crisis progresses.

A crisis develops when a challenge goes too far in the eyes of a denier. Here I think the analogy with the imaginary expanded, normal form or with Rapoport and Chammah is quite useful. Starting from quiescence one side or another or even both begin to make minor defections. Most of these defections will be accepted, but there will come a point at which one is denied. This is the boundary between Chicken and Prisoners' dilemma. The challenges of the Cuban and Agadir crises are reasonably

congruent with this formulation. The Soviets were involved in an aid program to Cuba which had a number of steps. Several early steps were accepted by the United States; the introduction of strategic weapons was not. The commitment area of the United States was breached with this increment. In the case of Agadir the French program of gaining Morocco and more importantly of ignoring German desires in the process was a long-term policy. Although most steps in the past five years had aroused no major denial, the Germans were so aroused when the French stepped up their penetration with a military occupation in the early months of 1911.

The denial is an attempt to regain a satisfactory situation--the status quo ante or a new situation. Particularly if the challenge has involved a physical move which ^{has} actually changed the situation structure in some respect, the denial is apt to involve a rather dramatic move. This is generally felt necessary since milder warnings have been ignored by the challenger. An incremental shift in policy then is likely to be inadequate here. The denial move or moves may be implemented incrementally, however, in order to maintain some flexibility or to control provocation to some degree. The purpose of the denial in the crises I have studied has not been to foreclose alternatives but to signal the challenger that he cannot continue his present strategy. There seems to be some concern in fact while signaling this credibly--that is, by making the challenger's present strategy ineffectual--to avoid foreclosing broad ranges of alternatives, particularly those leading toward deescalation.

The intersection of these two stages provides the confrontation. This is the escalation or lock-in stage although, since the opportunities for physical escalation are sometimes quite limited, defections may be

verbal. Essentially the confrontation is an incremental^{ed} extension of the challenge and denial moves for the challenger and denier respectively. Flexibility is shown in seeking out and ~~using~~ using several different steps to convince the adversary that escalation is no one's prize and that deescalation ought to be initiated. When Schelling's ideal types apply in this stage they apply to ~~the~~ individual segments or moves, not to the stage as a whole. Thus foreclosure of all but one alternative characterizes Robert Kennedy's Saturday warning to Mobrynin but not the activity of the challenge as a whole which was an iteration sequence of incremental defections in which alternatives were foreclosed as little as possible until the very end. Likewise Caillaux's "eight days" threat was not the rule for the Agadir crisis. Rather several different tactics were used, and, whenever a tactic endangered the maintenance of alternatives-- particularly deescalatory ones~~es~~, it was dropped.

Breakdown comes as one or both parties find the cost of maintaining or continuing escalation to be too high. This again must be similar to the realizations of Rapoport and Ghammah's players as they begin to work their way out of lock-in. The notion of a crisis as a turning point is realized quite nicely in the abstract here. Presumably the crisis is about the present location of the main diagonal of the imaginary expanded, normal form matrix. A final settlement to the right or below this diagonal would mean an improvement in the strategic position of the column or the row player respectively. And, this settlement would then provide the upper, left-hand corner for future conflict. Thus the degree to which a crisis is a turning point might be indicated by the distance of the settlement from the status quo ante equilibrium of the main diagonal.

The Cuban and Agadir crises fit this mold rather well, and this is not surprising since it was developed from them. I would be quite surprised if this pattern would fit all international crises without alteration although I can ~~think~~ think of some--Fashoda and Berlin--which at least from my rather superficial knowledge seem congruent. So, I will admit that the utility of the stage notion as a general form is dependent upon future alterations designed to incorporate the characteristics of a broader sample of cases. The utility of the stage notion at all, however, is its ability to provide some indication of what is to be expected at various points in a crisis and why. In closing then I would like to assess its utility on this criterion.

The stage notion is an operationalization of two abstractions--the analogy with Rapoport and Chammah's activity model and its transposition onto an open, expanded, normal form matrix--which have proved difficult to operationalize in more formal fashions. As such it is a poor man's tool to be sure. The congruence it offers, like that of the models upon which it is based, comes at a high price in terms of parsimony and elegance. The stage notion itself then will, I am sure, quickly be forgotten. Yet the ability of its bases--Simon's decision process model, the expanded, normal form matrix, and the supergame--to generate notions useful to the interpretation of crisis activity should not, I think, be ignored because of the inadequacies of the present derivative. Rather the development of a better derivative should be attempted.