A Cognitive Approach to International Negotiation*

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ABSTRACT

When it comes to the study of international negotiation *processes*, game theory has certain shortcomings. It is basically static in nature; it tends to homogenize actors and 'blackbox' information processing; and it assumes unitary actors. This article suggests a cognitive approach to the study of international negotiation processes as one way to overcome these shortcomings. The suggested model regards information processing as the link between inter-state negotiation and decision-making within the state, and emphasizes the role of belief systems in shaping expectations and interpretations. Specifically, the negotiating actors' images of the adversary, self-images, and images of situation are singled out as suitable objects of study. Relevant insights and hypotheses concerning the relationship between different parts of the actors' belief systems are identified.

1. INTRODUCTION

Bargaining is one identifiable mode of social or joint decision-making, to be distinguished from *coalition*, when the choice is made by numerical aggregation (such as voting), and *judication*, when the choice is made hierarchically by a judge who aggregates conflicting values and interests into a single decision. In bargaining the parties are left to themselves to combine their conflicting points of view into a single decision (Zartman, 1978, 69–70).

Regardless of what the formal decision rule may be, an element of bargaining usually precedes social decisions. This applies, *a fortiori*, to decisions among sovereign states which do not recognize any authority above and beyond themselves nor consider themselves bound by decisions to which they have not consented. Hence, neither the judgments of the International Court of Justice nor voting in the United Nations have become central areas of research in the field of international politics. Indeed, the once so popular statistical analyses of voting patterns in the UN General Assembly have been criticized precisely for overlooking the decisive underlying bargaining processes.

A *bargaining situation* is characterized by the coincidence of co-operative and conflictual elements as well as interdependent decisions (Deutsch and Krauss, 1962, 52; Schelling, 1963, 5–6; Coddington, 1968, 4–6; Jönsson, 1979, 8–9). Examples of bargaining situations, thus defined, abound in all aspects of social life. The super-power relationship of 'mutual deterrence' is a case in point. In fact, most relations between nations can be seen as bargaining situations, as well as such everyday situations as manoeuvring a car in a traffic jam or trying to get your partner to follow you through the intricate figures of a tango.

As these examples suggest, *bargaining processes* may be either explicit or tacit. In either case, some sort of *signals* are exchanged. In tacit bargaining, 'adversaries watch and interpret each other's behaviour, each aware that his own actions are being interpreted and anticipated, each acting with a view to the expectations that he creates' (Schelling, 1963, 21). The term *negotiation* is usually reserved for explicit bargaining. Negotiation then refers to a formalized process in which verbal signals are exchanged. This analytical distinction is not always possible to uphold. Especially in international politics, acts often take on a symbolic significance, and words become acts. In the context of international negotiations, 'commitment' – the common practice among states to underscore their words with deeds – is a well-known phenomenon.

The ubiquity of bargaining situations in social life has meant that bargaining has attracted interest within different social science disciplines, and research on bargaining displays a rare degree of interdisciplinary cross-fertilization. The problems of price determination under duopoly and of 'isolated exchange' under bilateral monopoly (for example, trade union *vs.* employer) have urged economists to abandon the theory of markets (based on mutual independent choice rather than interdependent choice) and develop bargaining theories. The study of wage bargaining has not been reserved for economists, but has also engaged sociologists and social psychologists. As a result, a large and diversified literature on collective bargaining has emerged. By the same token, the study of international negotiations, traditionally the domain of diplomatic historians and political scientists, has received impulses from other disciplines. Symptomatically, the work of an economist, Thomas Schelling (1963), in which economic and game-theoretical models were complemented with psychological insights, proved to be of seminal importance.

One basic distinction can be made between those approaches focusing on the *process* and those focusing on the *outcome* of bargaining. Economic theories of negotiation have aimed primarily at finding the 'solution' of the negotiation process. These quasi-deterministic theories assume the outcome to be dependent on a specifiable number of delineable variables, and often aspire to prediction. Such outcome-orientated theories are rarer in the field of international negotiation, although there do exist certain noteworthy attempts at predicting the outcome of recurrent, distributive negotiations, such as fishery negotiations (for example, Inoguchi and Miyatake, 1979; Underdal, 1980).

The primary focus of most students of international negotiation, however, has been the negotiation process itself rather than its outcome. William Zartman's (1978, 72–3) verdict upon economic theories epitomizes the viewpoint of most political scientists:

. . . their determinancy above all depends on artificial constructs and unoperationalizable concepts, such as indifference curves, negotiating fronts, and Pareto-optimality. . . . The economic theories' determinant

outcomes have little or no predictive power, for their very determinancy makes them count as irrationality any element of power, persuasion, or coercion that could cause deviation from the predicted result.

Strategic interaction, mutual influence attempts, concession/convergence, the nature and credibility of negotiation moves are examples of the kind of process variables that students of international negotiation have tended to dwell upon.

2. HOW USEFUL IS GAME THEORY?

Most extant bargaining models, whether they focus on process or outcome, have a common game-theoretical heritage. Few would dispute the heuristic value of game theory for the study of bargaining. But when it comes to the study of international negotiation processes – which is the primary concern of this article – game theory has certain shortcomings as an analytical tool.

One set of problems concerns its *static nature*. The game-theoretical actor is supposed to have a strategy, that is a plan encompassing his specific responses to all possible move sequences of the other actor. A play of the game, then, consists of a single simultaneous choice of strategy by each of the actors, after which the outcome of the game is determined. It seems far more realistic, however, to conceptualize negotiations in terms of successions of choices and adjustments.

The *homogenization of actors* represents another problematic aspect of game theory. All actors are assumed to be equally rational, arriving at their decisions by means of similar utility × probability calculi. The game-theoretical conception leaves little room for actor idiosyncrasies. The payoff structure rather than actor attributes determines the playing and outcome of the game.

Furthermore, game theory 'blackboxes' the problematic and interesting *information processing* aspects of decision-making. The rational actor of game theory is simply assumed to have perfect knowledge. In order to make a rational choice he must identify the payoffs of both or all actors. That is, in addition to perceiving all alternative choices available to himself and determining the utility and probability of all possible outcomes of these choices, he must also know all the constituent elements of each adversary's calculus. Needless to say, such conditions are hardly ever met in real-life bargaining situations.

Finally, game theory envisages *unitary actors*. In the international context, this has meant adherence to Graham Allison's (1971) 'Model I' or 'Classical Model' of alert, intelligent, co-ordinated states. Yet, as revealed by a recent study of the views of senior USA government officials, practitioners tend to emphasize the importance of internal bargaining between different bureaucracies and groupings (Allison's 'Model III' of 'Governmental Politics') and find the academic literature lacking in that respect: 'The concern of practitioners for internal negotiation contrasts sharply with the theoretical literature, which focuses almost totally on the external aspect of negotiation' (Winham, 1979, 116–17).

To overcome these shortcomings, game-theoretical insights obviously need to be supplemented. Specifically, the study of international negotiation processes requires a vantage point which permits dynamic analysis, takes actor differences into account, has a realistic conception of the actors' information processing, and allows for the lack of cohesion and internal bargaining within actors. As I shall try to demonstrate, a cognitive approach to international negotiation promises to meet these requirements.

3. OUTLINE OF A COGNITIVE APPROACH

From the viewpoint of game theory, negotiation can be seen as communication superimposed on a game. Its constituent parts are statements by the actors about the game and its possible solution. If we regard a bargaining situation as the basic game, the negotiation may be seen as a new 'transcended' game where communicative acts are moves of the game (Midgaard, 1965, 185–6; Rapoport, 1960, 232; Rapoport, 1964, 118–19). The human capacity to acquire, reveal, and conceal information then becomes crucial, and creates the problem of interpretation associated with communication moves (Goffman, 1969, 4; Rapoport, 1964, 122–4; Shubik, 1967, 261). In so far that the less than omniscient actors use each other's moves as informational inputs into their decision-making, negotiation involves a learning process.

This reconceptualization puts communication and cognition at centre stage. It has indeed been argued that 'the deductive logic of bargaining theory can be operationalized only by introducing cognitive variables' (Sigal, 1979, 571):

Cognitive variables are needed to explain what images adversaries have of the game and of each other and what strategies each devises for play, for shaping opponents' perceptions of the game. Communication variables must be introduced to show how adversaries modify their initial images and strategies – or resist such modification – in the light of feedback from the other side.

Cognitive theorists, for their part, generally assume that cognitive processes among decision-makers assume special significance when the choice situation is characterized by 'structural uncertainty'. This is the case, for example, when the situation is (a) new without familiar clues; (b) complex with a great number of clues to be taken into account; or (c) contradictory with different elements suggesting different interpretations. Bargaining situations seem to provide eminent examples of 'structural uncertainty'.

If we adopt a cognitive focus, the problems raised by selective attention and interpretation, rather than being shunned as in game theory, become analytical points of departure. Since statesmen obviously differ in their perceptions of bargaining situations across and even within nations, it does not seem useful to maintain an analytical perspective that presupposes a norm of similar and accurate perceptions:

Since each party to a conflict reacts not to the situation as perceived by the other but rather to the situation as seen from its own perspective, the nations are not reacting directly to each other. Under these conditions it is necessary to understand the perspectives guiding each national unit's activity, and thus how these perspectives differ, in order to grasp the actual flow of strategic interaction. (Lockhart, 1979, 38)

In essence, what I am suggesting is a model which regards information processing as the link between interstate negotiation and decision-making within the state, and which views negotiation as a process of adjusting initial expectations and interpretations. The economist Alan Coddington (1968) has suggested a skeletal model along these lines which has been adapted and developed by political scientists interested in international negotiation (Jönsson, 1979, 15–16; Snyder and Diesing, 1977, 282–339). Coddington's model of negotiation can be represented schematically as a 'closed loop system' (cf. Figure 1).

At the outset, each negotiating actor has a set of *expectations* about how the adversary is likely to respond to his moves. As soon as negotiation begins, each actor is in a position to test his initial expectations. The decisional output from one of the
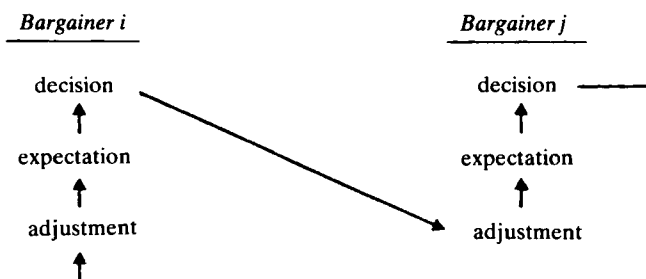
Fig. 1. Coddington's model.

actors serves as informational input into the other actor's decision-making process. In the light of his current expectations, actor A makes a negotiation move which is used by actor B to test and either validate or adjust his expectations. B's move, made on the basis of his validated or adjusted expectations, is, in turn, used by A to test his initial expectations, etc.

Glenn Snyder and Paul Diesing (1977, 283–4) have expanded Coddington's model by amplifying the actors' cognitive processes. Expectations and interpretations are affected to a considerable extent by the actors' *belief systems*. By adding these to the model, Snyder and Diesing introduce additional feedback loops (see Figure 2). This has several implications. First, it opens up the possibility of *misperception*: the message sent by A need not be the message received by B. Furthermore, it allows for the failure to adjust mistaken expectations, a possibility that is not present in Coddington's original model. There, adjustment is gradual and automatic, and the system automatically converges toward a settlement.
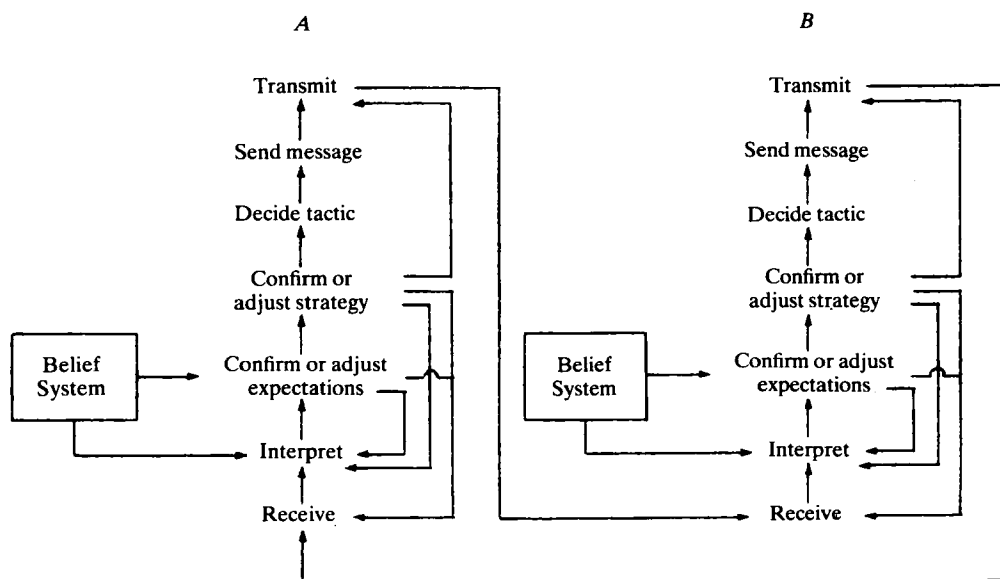

Fig. 2. Snyder and Diesing's model.

This conception suggests two pertinent areas of research: (1) the process of communicating messages or signals; and (2) the role of belief systems in shaping expectations and interpretations.

The problems associated with communication in negotiation have received considerable attention among bargaining theorists. To be effective, signals must first of all be perceived by the adversary. They will be ineffective if the adversary is somehow unavailable to perceive the signals. Conversely, a signal may be perceived regardless of whether it has actually been sent or not. The behaviour of the opponent may, for example, be anticipated or simply misunderstood. If the signal is perceived, the key problem of *credibility* remains.

The adversary will, as analysed in detail by Erving Goffman (1969) and Rȯbert Jervis (1970), look beyond the manifest signals, which are readily subject to manipulation, for less easily manipulated 'indices' believed to be inextricably linked to the other actor's capabilities or intentions and untainted by deception. The effective use of indices for credibility estimates requires that the sender is unconscious of the fact that the adversary perceives certain behaviour as an index. Once the sender becomes conscious of this, possibilities of manipulation emerge. If the receiver, in turn, becomes conscious of the adversary's manipulation, 'multiple cycles of manipulation' may result. In short, there is no hard and fast solution to the credibility problem. Credibility estimates are inevitably subjective and are usually coloured by the belief systems of negotiating actors.

We thus come to the problem of how belief systems affect expectations and interpretations. This is an area which holds out a promise of bridge-building and cross-fertilization between bargaining theory and cognitive theory. A number of social science disciplines seem to be converging into a common information-processing framework, inspired to a considerable degree by cybernetics. According to this new paradigm, every information-processing system, in order to simplify and structure the external world, acquires a 'memory' or a set of beliefs and constructs about the physical and social environment which act as 'filters' in information processing. These beliefs are generally assumed to be organized into structured systems and represent, as it were, cognitive limits to rational decision-making.

The ascendancy of the information-processing paradigm entails important shifts in fundamental 'model of man' assumptions. First, the conception of man as a passive agent who merely responds to environmental stimuli has given way to a conception of man as selectively responding to and actively shaping his environment. In addition, within the conceptualization of man as an active agent, there has been a shift away from cognitive balance theories viewing man as a 'consistency seeker' to attribution theories viewing man as a 'problem solver' or 'naïve scientist' (George, 1980, 56). Whereas cognitive consistency theorists assume that people see what they expect to see by assimilating incoming information to pre-existing images and interpreting new information in such a way as to maintain or increase balance, attribution theorists are concerned with the individual's attempts to comprehend the cause(s) of behaviour and assume that spontaneous thought follows a systematic course that is roughly congruent with scientific inquiry.

In the next section I shall turn to existing cognitive approaches to political decision-making in search of insights and findings which might be relevant to the study of international negotiation processes.

4. BELIEF SYSTEMS AND NEGOTIATING BEHAVIOUR

If we accept that perceptions do matter in international negotiations and, further-more, that perception is largely a matter of intercepting, classifying, and interpreting information in terms of pre-established belief systems, then the question arises as to which beliefs and images are most likely to influence the negotiating behaviour of states. The literature on cognitive processes provides one standard answer to the question of what level of cognitive structure one should look for beliefs that influence decision making behaviour: 'central' beliefs have a greater impact than peripheral ones. Yet researchers disagree as to how to determine cognitive centrality. Let us therefore first make a digression into existing bargaining theory to see which vari-ables are usually singled out as central in accounting for negotiating behaviour (Jönsson, 1978).

A distinction can be made between situation-specific and actor-specific explana-tions. By homogenizing actors, game theory normally explains variances in bargaining behaviour in terms of situational factors rather than actor idiosyncracies. In a similar fashion, social psychologists, employing experimental methodology, have studied the effect of variations in manipulated situational factors on negotiating behaviour.

Practitioners often base themselves on more or less explicit actor-specific perspect-ives. Actor characteristics rather than situational or contextual variables are con-sidered to be decisive factors. This is perhaps most pronounced in international negotiations, where assumptions about national 'negotiating styles' seem to be legion. They have thrived especially – yet by no means exclusively – within the context of East–West polarization. Nor is reliance on actor-specific models restricted to practitioners. The notion of national 'negotiating styles' recurs in scholarly works as well.

At this point, let me interject the distinction between the 'operational' and the 'psychological' environment of policy-makers, suggested by Harold and Margaret Sprout (1965) and developed further by Michael Brecher et al. (1969). The two modes of explanation outlined above direct our attention to the operational environ-ment – the independent variables are situational factors or actor idiosyncrasies as defined by the omniscient researcher. If we, however, redirect our focus to the psychological environment of policy-makers – which is, in essence, what a cognitive approach amounts to – the operational environment is assumed to influence decisions indirectly, filtered through the images or beliefs of decision-makers. The different modes of explanation can then be reformulated as categories of perceptions which ought to be of interest in the study of international negotiations. Hence I propose the negotiating actors' self-images, images of the adversary, and of the situation as relevant objects of study. Such a focus allows us to draw upon existing research on cognitive processes. In the remainder of the paper I shall point to some relevant insights from this research tradition.

Images of the Adversary. The centrality of images of the opponent in individual belief systems has been demonstrated in a series of 'operational code' studies. A change in the image of the opponent and, related to it, beliefs concerning the nature of political conflict, seems to require (psychologically from the standpoint of the actor) some compensating change in other parts of the belief system. And once an actor's image of the adversary is known, it is possible to deduce with moderate success a number of other beliefs (for example, George, 1979; Holsti, 1977).

In negotiations among enemy pairs, the existence of 'mirror images' is well documented (Bronfenbrenner, 1961; White, 1965; Eckhardt and White, 1967). What is black-and-white in one's belief system becomes white-and-black in the other's images, just as, when any object is held up to a mirror, what originally appeared as left-and-right appears in the mirror as right-and-left. The danger of mirror images lies in their tendency to be self-confirming, and thus give rise to vicious circles of self-fulfilling prophecies. Any kind of behaviour by the adversary is taken to validate these images. Conciliatory gestures are perceived as traps, whereas anything that appears threatening is seen as revealing the true nature of the adversary. The adversaries are thus liable to become prisoners of their own images in a way reminiscent of individual paranoid behaviour.

The significance of images of the adversary in American–Soviet negotiations has been explored in several studies. Edwin Fedder (1964) has analysed the tendency among American and Soviet negotiators to confuse 'communicator and communication credibility'. In a study of the nuclear test ban negotiations of 1958–63 I myself (Jönsson, 1979) found changes in Soviet negotiating behaviour to be correlated with shifts in, and internal bargaining about, Soviet images of the United States. And Snyder and Diesing (1977, 299–310) have explored the difference betwen 'hard-line' and 'soft-line' images of the opponent in a number of cases of crisis bargaining.

Self-Images. It could be argued that 'most of the studies which focus on decision-makers' perceptions include only perceptions of the external environment, especially enemy characteristics and actions, and very few investigate decision-makers' perceptions of their own nations' (Wish, 1977, 7). One notable exception is the research tradition, initiated by Kalevi Holsti (1970), which focuses on national roles, defined in terms of states' self-defined role conceptions (Walker, 1979; Wish, 1980; Jönsson and Westerlund, 1982). States, like other social actors, typically perform *multiple* roles. Holsti (1970, 260–73), for instance, identifies 17 different role conceptions in his cross-national survey, and finds that no state in his sample conceives of only a single national role. The fact that actors typically perceive themselves to enact several roles may create strains on the actors. Honouring one role conception can lead to behaviour that violates another.

In the context of international negotiations, Lars-Göran Stenelo (1972) has analysed the effects of 'multiple role-taking' and 'role-dependent' *vs.* 'role-independent' strategies in Sweden's attempts at mediation in the Eighteen-Nation Committee on Disarmament in the 1960s. And recently Daniel Druckman (1978) has suggested that the link between internal and international bargaining processes be conceptualized in terms of 'boundary role conflict' between the negotiator as bargainer and the negotiator as representative.

Images of Situation. Complexity, ambiguity and uncertainty are important characteristics of most bargaining situations. Therefore the actors' 'definitions of the situation' have an obvious impact on their negotiating behaviour. In interpreting a situation, an actor normally searches his memory or belief system for comparable situations:

Confronted with this complexity, bargainers use clues arising from their experiences. That is, they select as the focus for their attention those aspects of situations that have been useful to them in the past. Personality differences and variations in previous experience impact on perception so that various individuals perceive given situations differently. (Lockhart, 1979, 42)

The tendency among policy-makers to conceive of new situations in terms of

analogies (Stenelo, 1981) and simplistic historical 'lessons' (May, 1973; Jervis, 1976, 217–87) has been well documented. If, in a bargaining context, the actors rely on different analogies and 'lessons', this means that the actors may perceive themselves to be playing different games.

5. IMPLICATIONS AND HYPOTHESES

Let me briefly mention some implications of a cognitive approach as compared to other bargaining models, and point to relevant hypotheses concerning the relationship between different parts of the negotiating actors' belief systems.

First, a cognitive approach allows us to uncover *incompatible beliefs* among the negotiating actors, a factor that frequently complicates and aggravates international negotiations. As noted by Robert Jervis (1976, 69–70):

Because statesmen believe that others will interpret their behaviour as they intend it and will share their view of their own state's policy, they are led astray in two reinforcing ways. First, their understanding of the impact of their own state's policy is often inadequate – i.e. differs from the views of disinterested observers – and, second, they fail to realize that other states' perceptions are also skewed.

To illustrate this, Snyder and Diesing (1977, 292) in their penetrating analysis of historical cases of crisis bargaining found that 'in only two crises . . . were *both* parties' initial images of the other substantially similar to the other's self-image'.

Second, in comparison to those bargaining models which depict negotiation as a streamlined process from the initial bids via mutual concessions to the final outcome, a cognitive approach tends to emphasize *resistance to change* among negotiating actors. Jervis (1976, 291–6) has identified several psychological mechanisms which tend to make belief systems resistant to change. The actor may (1) fail to see that new information might contradict his beliefs; (2) see the information as discrepant but reject its validity; (3) discredit the source of discrepant information; (4) admit puzzlement with new information; (5) engage in bolstering – seeking new information that supports initial beliefs; (6) engage in undermining – adducing additional elements to weaken discrepant information; (7) engage in differentiation – splitting the object by sloughing off the parts that are causing attitudinal conflict; and/or (8) invoke transcendance – the opposite mechanism from differentiation, where elements, instead of being split down, are built up and combined into larger units. Moreover, change is impeded by the frequently noted tendency over time to escalate perceived utility as a result of the 'investment' or accumulated expenditure incurred in the pursuit of an object (Edmead, 1982).

If cognitive closure may contribute to deadlock in negotiations, cognitive complexity, which normally includes some tolerance for ambiguity and moderately inconsistent images, is positively related to an actor's receptivity to new information and willingness to negotiate (Shapiro and Bonham, 1973, 150): 'Tolerance for ambiguity entails both the ability of a statesman to recognize that a developing situation is not fulfilling his image, or at least that it may be fulfilling alternative images, and a willingness to suspend judgment pending further, clearer information' (Lockhart, 1979, 55).

What about the relationship between the relevant parts of negotiating actors' belief systems identified above – self-images, images of the adversary, and images of the situation? First, one useful technique which has been employed to reconstruct empirically policy-makers' beliefs about delimited issue-areas is 'cognitive mapping'

(Axelrod, 1976; Shapiro and Bonham, 1982). A cognitive map is a graphic representation designed to capture the structure of a decision-maker's stated beliefs about a particular problem. Drawing on some of the mathematical ideas of graph theory, cognitive mapping focuses on identifying concepts and causal links between concepts. From these, 'cognitive paths' may be constructed where the concepts a decision-maker uses are represented as points, and the causal links between these concepts are represented as arrows between these points. Thus the centrality of, and interrelationships between, different beliefs can be construed. As a mathematical model of a belief system, the cognitive map lends itself to computer analysis and simulation techniques. Cognitive maps, in addition to indicating how a decision-maker performs certain cognitive operations, can also be used to predict his reaction to hypothetical situations.

As for hypotheses concerning relationships between beliefs, attribution theorists have identified – and students of international politics have amplified – a 'fundamental attribution error' of relevance to images of self, other, and situation. There appears to be a tendency to overemphasize *dispositional* factors (images of the adversary) when explaining or interpreting the behaviour of others while stressing *situational* factors to account for one's own behaviour. This tendency is assumed to be enhanced among enemies. Daniel Heradstveit's (1979) study of Arab and Israeli élite perceptions suggests a reformulation of the original hypothesis. The tendency among adversaries seems to be that one's own 'good' behaviour as well as the adversary's 'bad' behaviour are explained in dispositional terms. Conversely, 'bad' behaviour of one's own side and 'good' behaviour by the other are attributed to situational factors. In brief, 'I am essentially good but am occasionally forced by circumstances to behave badly, whereas you are bad but are occasionally forced by circumstances to behave well'. This attribution error is often coupled with, and reinforced by, the common tendency to see the behaviour of others as more centralized, planned, and co-ordinated than it is (Jervis, 1976, 319–42). Henry Kissinger's (1979, 522) observation on US–Soviet perceptions is to the point:

The superpowers often behave like two heavily armed blind men feeling their way around in a room, each believing himself in mortal peril from the other whom he assumes to have perfect vision. Each side should know that frequently uncertainty, compromise, and incoherence are the essence of policy-making. Yet each tends to ascribe to the other side a consistency, foresight, and coherence that its own experience belies.

6. METHODOLOGICAL PROBLEMS

In this paper I have argued in favour of a cognitive approach to international negotiation, outlined possible components of a model, and pointed to some relevant hypotheses. In conclusion, let me briefly touch upon some fundamental methodological problems associated with a cognitive approach (cf. Jönsson, 1982).

First, are we justified in applying concepts and hypotheses derived from the study of individuals to collective entities such as states? There is an obvious risk of personifying abstract concepts. The cognitive approach, of course, shares this risk with most other approaches to international negotiation. It is only by way of metaphor and analogy that we can speak of states as perceiving and acting. On the other hand, it may be argued that national unity 'is largely a matter of perception and emotion' (Stagner, 1967, 46). In the words of one caustic characterization, a nation is

'a society united by a common error as to its origin and a common aversion to its neighbours' (Klineberg, 1964, 54).

Another obvious difficulty with cognitive approaches concerns access to data. No 'hard' data on the cognitive beliefs or processes of decision-makers exist. Nor is there agreement as to what constitutes the best available 'soft' data, or the appropriate categories into which whatever data are available can be coded (Holsti, 1976, 35).

Whether written sources or interviews are used to reconstruct the perceptions of political actors, the fundamental issue of validity has to be faced. Does the actor express what he perceives, and does he perceive what he expresses? There is no easy solution to this problem, which parallels the credibility problem facing negotiating actors. The analyst – as well as the negotiator – runs the double risk of either overlooking significant nuances of a message (underinterpretation), or finding hidden meanings where there is none (overinterpretation). Recall, for instance, Metternich's reputed reaction to the sudden death of a Russian ambassador: 'I wonder what he meant by that!'

These problems notwithstanding, it is my contention that a movement away from the 'objective' world of mathematics in the direction of the 'subjective' world of cognitive psychology – a substitution of 'psychologic' for pure logic – represents a step in the right direction in the further development of bargaining theory.

REFERENCES

Allison, G. T. (1971). *Essence of Decision*. Boston: Little, Brown.

Axelrod, R. (ed.) (1976). *Structure of Decision*. Princeton: Princeton University Press.

Brecher, M. *et al.* (1969). 'A Framework for Research in Foreign Policy Behavior', *Journal of Conflict Resolution* 13, 75–101.

Bronfenbrenner, U. (1961). 'The Mirror Image in Soviet–American Relations: A Social Psychologist's Report', *Journal of Social Issues* 17, 45–56.

Coddington, A. (1968). *Theories of the Bargaining Process*. London: Allen and Unwin.

Deutsch, M. and Krauss, R. M. (1962). 'Studies of Interpersonal Bargaining', *Journal of Conflict Resolution* 6, 52–76.

Druckman, D. (1978). 'Boundary Role Conflict: Negotiation as Dual Responsiveness', in Zartman, I. W. (ed.), *The Negotiation Process: Theories and Applications*. Beverly Hills: Sage.

Eckhardt, W. and White, R. K. (1967). 'A Test of the Mirror-Image Hypothesis: Kennedy and Khrushchev', *Journal of Conflict Resolution* 11, 325–32.

Edmead, F. (1982). 'Changes in Perception During the Course of Conflict', in Jönsson, C. (ed.), *Cognitive Dynamics and International Politics*. London: Frances Pinter.

Fedder, E. H. (1964). 'Communication and American–Soviet Negotiating Behavior', *Background* 8, 105–20.

George, A. L. (1979). 'The Causal Nexus between Cognitive Beliefs and Decision-Making Behavior: The "Operational Code" Belief System', in Falkowski, L. S. (ed.), *Psychological Models in International Politics*. Boulder: Westview.

George, A. L. (1980)). *Presidential Decisionmaking in Foreign Policy: The Effective Use of Information and Advice*. Boulder: Westview.

Goffman, E. (1969). *Strategic Interaction*. Philadelphia: University of Pennsylvania Press.

Heradstveit, D. (1979). *The Arab–Israeli Conflict: Psychological Obstacles to Peace*. Oslo: Universitets-forlaget.

Holsti, K. J. (1970). 'National Role Conceptions in the Study of Foreign Policy', *International Studies Quarterly* 14, 233–309.

Holsti, O. R. (1976). 'Foreign Policy Formation Viewed Cognitively', in Axelrod, R. (ed.), *Structure of Decision*. Princeton: Princeton University Press.

Holsti, O. R. (1977). 'Toward a Typology of "Operational Code" Belief Systems', Final Report to the National Science Foundation. Duke University.

Inoguchi, T. and Miyatake, N. (1979). 'Negotiation as Quasi-Budgeting: The Salmon Catch Negotiations Between Two World Fishery Powers', *International Organization* 33, 229–56.

Jervis, R. (1970). *The Logic of Images in International Relations*. Princeton: Princeton University Press.

Jervis, R. (1976). *Perception and Misperception in International Politics*. Princeton: Princeton University Press.

Jönsson, C. (1978). 'Situation-Specific versus Actor-Specific Approaches to International Bargaining', *European Journal of Political Research* 6, 381–98.

Jönsson, C. (1979). *Soviet Bargaining Behavior: The Nuclear Test Ban Case*. New York: Columbia University Press.

Jönsson, C. (1982). 'Introduction: Cognitive Approaches to International Politics', in Jönsson, C. (ed.), *Cognitive Dynamics and International Politics*. London: Frances Pinter.

Jönsson, C. and Westerlund, U. (1982). 'Role Theory in Foreign Policy Analysis', in Jönsson, C. (ed.), *Cognitive Dynamics and International Politics*. London: Frances Pinter.

Kissinger, H. (1979). *White House Years*. Boston: Little, Brown.

Klineberg, O. (1964). *The Human Dimension in International Relations*. New York: Holt, Rinehart & Winston.

Lockhart, C. (1979). *Bargaining in International Conflicts*. New York: Columbia University Press.

May, E. R. (1973). *'Lessons' of the Past: The Use and Misuse of History in American Foreign Policy*. New York: Oxford University Press.

Midgaard, K. (1965). *Strategisk tenkning*. Oslo: Norsk Utenrikspolitisk Institutt.

Rapoport, A. (1960). *Fights, Games, and Debates*. Ann Arbor: University of Michigan Press.

Rapoport, A. (1964). *Strategy and Conscience*. New York: Harper and Row.

Schelling, T. C. (1963). *The Strategy of Conflict*. New York: Oxford University Press.

Shapiro, M. J. and Bonham, G. M. (1973). 'Cognitive Process and Foreign Policy Decision-Making', *International Studies Quarterly* 17, 147–74.

Shapiro, M. J. and Bonham, G. M. (1982). 'A Cognitive Process Approach to Collective Decision Making', in Jönsson, C. (ed.), *Cognitive Dynamics and International Politics*. London: Frances Pinter.

Shubik, M. (1967). 'The Uses of Game Theory', in Charlesworth, J. C. (ed.), *Contemporary Political Analysis*. New York: Free Press.

Sigal, L. V. (1979). 'The Logic of Deterrence in Theory and Practice', *International Organization* 33, 567–79.

Snyder, G. H. and Diesing, P. (1977). *Conflict Among Nations: Bargaining, Decision Making, and System Structure in International Crises*. Princeton: Princeton University Press.

Sprout, H. and Sprout, M. (1965). *The Ecological Perspective on Human Affairs*. Princeton: Princeton University Press.

Stagner, R. (1967). *Psychological Aspects of International Conflict*. Belmont, Ca.: Wadsworth.

Stenelo, L.-G. (1972). *Mediation in International Negotiations*. Lund: Studentlitteratur.

Stenelo, L.-G. (1981). 'Prediction and Foreign Policy Heritage', *Cooperation and Conflict* 16, 3–17.

Underdal, A. (1980). *The Politics of International Fisheries Management*. Oslo: Universitetsforlaget.

Walker, S. G. (1979). 'National Role Conceptions and Systemic Outcomes', in Falkowski, L. S. (ed.), *Psychological Models in International Politics*. Boulder: Westview.

White, R. K. (1965). 'Images in the Context of International Conflict: Soviet Perceptions of the US and the USSR', in Kelman, H. C. (ed.), *International Behavior: A Social-Psychological Analysis*. New York: Holt, Rinehart & Winston.

Winham, G. R. (1979). 'Practitioners' Views of International Negotiation', *World Politics* 32, 111–35.

Wish, N. B. (1977). 'Relationships between National Role Conceptions, National Attributes, and Foreign Policy Behavior', unpublished Ph.D. dissertation, Rutgers University.

Wish, N. B. (1980). 'Foreign Policy Makers and Their National Role Conceptions', *International Studies Quarterly* 24, 532–54.

Zartman, I. W. (1978). 'Negotiation as a Joint Decision-Making Process', in Zartman, I. W. (ed.), *The Negotiation Process: Theories and Applications*. Beverly Hills: Sage.