

**Working Paper 1992:8**

**Leadership in  
international  
environmental  
negotiations**

**Designing feasible solutions**

---

*Arild Underdal*

ISSN: 0804-452X

Working Paper 1992:8

**Leadership in International  
Environmental Negotiations:  
Designing Feasible Solutions**

by

**Arild Underdal**

---

June 1992

## 1. Introduction

Proceeding from the assumption that the quality of leadership is one important determinant of success in international problem-solving efforts, this paper addresses two main questions: First, what are the *mechanisms* through which leadership can be exercised in international negotiations, and what are the *capabilities* required to make each of these mechanisms "work"? Second, what (if any) implications can be inferred from theories of negotiation and cooperation for the practical *exercise* of leadership? In this paper the latter question can be addressed only with reference to one particular leadership task; viz. the design of politically feasible solutions. The latter question can, then, be rephrased as follows: What are, according to these theories, the basic principles that we shall have to observe in designing solutions that can be adopted and implemented through voluntary international cooperation?

Before pursuing these questions, however, a few words are in order about the concept of "leadership" itself, and the significance of leadership in international environmental management.

For our purposes, "leadership" can be defined as an asymmetrical relationship of influence, where one actors guides or directs the behavior of others towards a certain goal over a certain period of time.<sup>1</sup> Leadership clearly involves the exercise of influence and perhaps power, but only some relationships involving influence or power qualify as instances of leadership (cf Burns 1978:18). For one thing, a leader is supposed to exercise what might be called "positive" influence, *guiding* rather than vetoing or obstructing collective action. Thus, leadership is associated with the collective pursuit of some common good or *joint* purpose (see e.g. Burns 1978:19f; Lindberg & Scheingold 1970:128). According to this definition, being the first to defect from a joint undertaking would not qualify as "leadership", however great and immediate the impact of that defection might be upon the behavior of one's partners. Kindleberger (1981) even considers a particular "responsibility" of behavior to be a defining characteristic of leadership. The notion of a joint purpose also implies that leadership cannot be based *only* on coercion, let alone brute force. Finally, as defined above, a leader-follower relationship is characterized by a fairly consistent *pattern* of

---

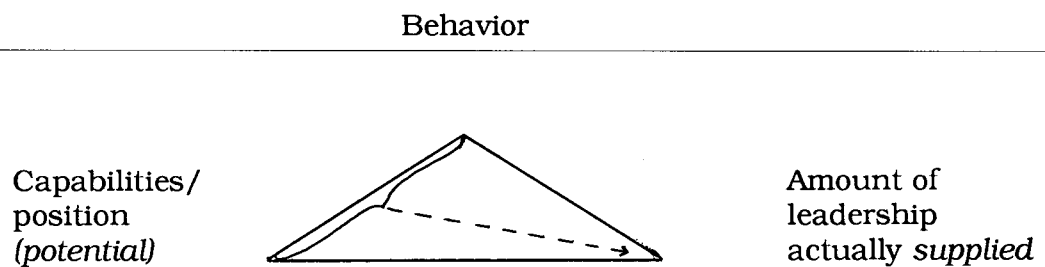
<sup>1</sup> This is a rather crude definition, but it seems to capture the essence of those provided in, inter alia, *The Encyclopedia of Social Sciences* (see vol. 9, p. 8), *The Handbook of Social Psychology* (cf Gibb 1969:212f), and Burns 1978:18.

interaction extending throughout a certain period of time (e.g. the lifetime of a particular "project"). Once in a rare while having a bright idea accepted by some others is not sufficient to make you a leader.

As defined above, leadership is a *relationship* between leader and followers. The *strength* of this relationship may be conceived of as a function of the *supply* of and the *demand* for leadership "services".

As indicated in figure 1, the amount of leadership actually *supplied* by an actor can most simply be perceived of as a function of two major determinants: *capabilities* and structural positions constituting sources of potential influence, and *behavior*, more or less effectively transforming potential into actual leadership. For all practical purposes, certain capabilities and a certain minimum of effort and tactical behavior may be considered necessary, but not sufficient, conditions for leadership. Effort and tactical ingenuity can *to some extent* - but not completely - compensate for a weak power base (see e.g. Bacharach & Lawler 1981:96f; Habeeb 1988:132). And much can be lost in attempts at transforming a strong power base into actual influence.

Figure 1: Potential and actual supply of leadership



The *demand* for or responsiveness to leadership can similarly be conceived of as a function of characteristics of the followers themselves and of the negotiation problem they are faced with. Other things being equal, the lower a participant's rating of his own competence, and the more his interests and values coincides with those of the prospective leader, the more inclined he will be to accept for himself a role as "follower". Similarly, the shorter the decision time, the stronger the element of surprise, and the higher the complexity of the issues and the decision situation, the greater is likely to be the demand for or at least the tolerance of leadership provided

by others.<sup>2</sup> Short decision-time puts a premium on speed, surprise induces actors to search for *new* solutions, and complexity serves to increase decision and transaction costs.<sup>3</sup>

A leader does not supply leadership in the abstract; what he provides is a particular "product", i.e. a particular set of services designed to achieve some particular purpose. Similarly, followers do not demand, and will not subject themselves to, *any* kind of leadership; they are prepared to let themselves be led only in a particular direction, and perhaps only in a certain fashion. The strength of a leader-follower relationship depends, then, on the extent to which supply "matches" demand, as well as on the availability of other competitive "suppliers".

My objective in this paper is not to study the *significance* of leadership for the outcome of international problem-solving efforts. As indicated above, however, one basic assumption on which the argument is based is that leadership does in fact "matter". A few words should therefore be added in support of that assumption.

Such support can hardly be found in the formal "axiomatic-static" models of bargaining (see e.g. Nash 1950; Kalai & Smorodinsky 1975). Assuming perfect information, definite preferences, and a fixed institutional setting these models leave no scope for actor behavior or leadership to have any *independent* effect upon outcomes. By contrast, scholars studying cooperation on the basis of empirical evidence often point to leadership as one important determinant of success. To give but a few examples: Oran Young (1991:302; cf 1989:23) suggests that the presence of leadership is a necessary, although not a sufficient, condition for reaching agreement on the terms of constitutional contracts.<sup>4</sup> Similarly, Lindberg & Scheingold (1970:128) argue that "...leadership is the very essence of a capacity for collective action". And Cox (1973:155) suggests that "The quality of executive leadership may prove to be the most critical single determinant of the growth in scope and authority

---

<sup>2</sup> Compare findings in the study of crises management, e.g. Hermann (1972).

<sup>3</sup> I am grateful to Albert Weale for reminding me that transaction costs can be a very important determinant of the demand for or tolerance of leadership.

<sup>4</sup> This is, as Young himself points out (1991:302), a "strong" hypothesis in the sense that one single observation of "success" without the presence of leadership is sufficient to falsify it. On closer examination, however, it seems that Young's definition of leadership - "...the actions of individuals who endeavour to solve or circumvent the collective action problems that plague the efforts of parties to reap joint gains in processes of institutional bargaining.." (Young, 1991:285) - reduces this proposition to a more trivial statement.

of international organization". In more specific form, we can find similar arguments in several reports from prominent participants themselves. Thus, in his account of the "ozone diplomacy", the head of the US delegation observes that "..the activities of a multilateral institution {UNEP} were critical to the success of the negotiations", and that "..an individual nation's {USA's} policies and leadership made a major difference" (Benedick 1991:6). The conclusions offered by these and other prominent scholars and practitioners may not provide conclusive evidence that "leadership matters". But at the very least they seem to suggest that students of international cooperation would be well advised to devote some attention to the logic of political leadership.

## **2. Three modes of leadership**

In order to explore further the mechanisms through which leadership can be exercised and the capabilities required to succeed, it seems useful to distinguish between at least three main modes of leadership: viz. leadership through unilateral action, leadership by means of coercion, and instrumental leadership. In real life these and possibly other modes of leadership will often be found in some kind of combination - one implication being that several of the illustrations cited may well be "impure" cases where more than one of these basic mechanisms are simultaneously at work. As the differences are rather profound, I shall nevertheless examine briefly the logic of each ideal type.

### *2.1. Leadership through unilateral action*

This mode of leadership is exercised whenever an actor moves to solve a collective problem by his own efforts, thereby "setting the pace" for others to follow.<sup>5</sup> Unilateral action may do so through two "pace-setting" mechanisms: one is the *substantive impact* it leaves on the options available to other actors, the other is *social persuasion*.

The former mechanism is activated whenever actions undertaken by one party alters significantly the set of options available to others, and/or the costs or benefits flowing from one or more of these options. This is what happens when a "benevolent hegemon" provides collective goods to a "privileged group" at his own expense (see

---

<sup>5</sup> The term "unilateral" may here be interpreted liberally so as to include not only actions undertaken by *one* single actor, but also actions undertaken by a (small) subgroup of parties acting as a united coalition.

Olson 1968; Kindleberger 1981). The unilateral supply control scheme previously implemented by the world's leading exporter of petroleum in support of oil prices is one case in point. The intention of the US government to impose unilateral restrictions on the use of ozone-depleting substances is another. Note, though, that unilateral action to provide collective goods need not qualify as "leadership" according to the definition above. The "hegemon" certainly initiates and undertakes problem-solving efforts, but he does not thereby necessarily guide or control the behavior of *others* - and "leadership without followers" would be a contradiction in terms. In fact, to the extent that prospective partners are allowed to be free riders, unilateral action by one actor may *weaken* rather than strengthen their incentives to contribute.

Unilateral action may change the set of options available to others, or the consequences of one or more of these options, in many other situations as well. Thus, by imposing environmental safety standards upon products to be consumed within its own borders, the government of a large country may alter the structure of incentives facing foreign producers as well, thereby inducing a more general shift towards environmentally more benign products.

As indicated by the examples given above, leadership through unilateral action undertaken on its own substantive merits can be provided only by actors occupying a dominant or preponderant position within the "basic game" in question. The leader need not be at the apex of the "overall power structure" of world politics, but he must have (a) sufficient capabilities to accomplish significant results in a given system of activities all by himself, and (b) sufficient invulnerability to be able to tolerate "exploitation" by others.

Unilateral action may, however, provide leadership not only through its substantive impact on the set of opportunities facing others; it can work also through *social* mechanisms, notably as a means of *persuasion*. Particularly in situations characterized by high problem similarity unilateral action may be used for the purpose of demonstrating that a certain "cure" is indeed feasible or does work, or to set a "good example" for others to follow. The former line of argument can be found in e.g. some discussions about the feasibility of phasing out certain pollutants, such as CFCs (Benedick 1991). The latter is advocated by some groups of environmentalists, claiming that by unilaterally imposing upon one's own society stricter standards of pollution control a government can help strengthen public demand in other countries

for equally strict measures<sup>6</sup>. Conversely, by failing to adopt strict standards for itself a government may undermine its credibility as a champion of strict international rules.<sup>7</sup> Unfortunately, in most circumstances the negative impact of a "bad" example is likely to be greater than the positive impact of a "good" one. By imposing or threatening to impose unilateral measures of environmental protection, a government can also strengthen demand within its *own* society for *international* regulations. Thus, in the case of stratospheric ozone depletion the prospects of having to face more stringent national regulations seems to have been one main reason why several US firms joined forces with environmental groups in calling for an *international* regime (Benedick 1991; French 1992).<sup>8</sup> Moreover, in certain kinds of situations - for example those corresponding to what is known as the Assurance game<sup>9</sup> - unilateral action by one party may help dispel doubts about its real commitment.

The persuasive impact of unilateral action depends not primarily on its substantive impact, but rather on the amount of uncertainty removed or on its moral compellence and symbolic significance. Even actions that by themselves make no substantial contribution towards solving the basic problem itself can *indirectly* make a significant difference by helping to persuade others to follow. Accordingly, while leadership through the substantive impact of unilateral action is a privilege of the strong, exercising influence through the persuasive impact of unilateral action is a role to which also small and weak countries can aspire. "Cheap" acts may not do,

---

<sup>6</sup> If unilateral action produces *positive* externalities there is, however, a real risk that the persuasive impact of a good example will be offset by negative effects on partner incentives. Thus, if pollution control measures undertaken unilaterally by one country help protect the environment of its neighbors as well, the latter may very well find that their own optimal levels of abatement are now lower than they would otherwise have been. The general lesson may be stated as follows: Before relying on the intrinsic persuasiveness of a good example to carry the day, check whether and to what extent unilateral action produces positive externalities as well.

<sup>7</sup> This is the principal reason given by the Norwegian government for promoting and striving to implement North Sea regulations imposing larger abatement costs upon sparsely populated regions than the environmental damage caused by emissions from these parts of the country would seem to justify.

<sup>8</sup> A less benevolent interpretation would be that these firms tried to use international regulations as a vehicle for turning technological innovations into competitive advantage vis-a-vis foreign companies who still had to rely on CFCs.

<sup>9</sup> The basic problem of the Assurance game is that although both (all) actors prefer mutual cooperation to any other outcome, cooperation is not a *dominant* strategy for any of them. In fact, being the only one to contribute is the *worst* of all possible outcomes. This implies that whenever some amount of uncertainty pertains to the choice of one's prospective partner(s), an actor faces a dilemma.



though: The moral significance of a move will often depend, inter alia, on the amount of sacrifice incurred by the actor. And so may the credibility of "indices" (Jervis 1970:28).

## 2.2. Coercive leadership

Coercive leadership works through "sticks and carrots" affecting the incentives of others to accept one's own terms or at least make a concession. It is based on one actor's control over events important to others. One actor's (*A*'s) bilateral coercive potential vis-a-vis another (*B*) with regard to a specific set of issues (*i*) can be conceived of as a function of *B*'s relative interest in *i* ( $U_{ib}$ ) and *A*'s share of control over *i* ( $K_{ia}$ ) [formally  $U_{ib}K_{ia}$ ] (cf Coleman 1973). Control over important events can be deliberately used as a device to reward those who join or comply and/or to punish anyone who refuses to go along or defects from an established agreement.<sup>10</sup> In the coercive mode of leadership such control is deliberately used to gain bargaining leverage.<sup>11</sup> Coercive leadership is thus exercised through tactical diplomacy, involving at least the communication of a promise or a threat, and possibly also the fulfilment of that promise (if it succeeds), or the execution of the threat (if it fails). In tactical diplomacy an actor may promise or threaten to do things it would not contemplate *except* for the purpose of influencing the behavior of others. Such promises and threats often involve some kind of links to other issues, involving actors in an exchange of "concessions" across issues. And if each actor pursues his self-interest in a narrow sense, the "exchange rate" will be determined by the degree of *asymmetry* in their interdependence relationship.

Promises of financial and/or technical assistance, in return for joining a certain regime, seem to be a common strategy of inducing cooperation in international environmental management. In some form promises of assistance have figured prominently in, inter alia, the negotiations on measures to prevent the depletion of stratospheric ozone as well as in the negotiations on controlling the anthropogenic

---

<sup>10</sup> Notice that as used here, the word "coercion" refers to the use of promises and rewards as well as threats and punishment. In the context of cooperative problem-solving, "positive" instruments are, presumably, more frequently used than "negative" ones.

<sup>11</sup> This formulation raises the question of what to make of moves that are coercive in *effect* but not in *intent*. Such moves may clearly be *relevant* to the exercise of leadership, but if we conceive of leadership behavior as a *deliberate* effort at guiding others, they will not be an integral part of that effort.

sources of global climate change. "Negative" coercion - particularly in the form of "external" threats and punishment - seems to be a more rare phenomenon in this field, but it has been successfully used, inter alia, by the US as a means of bringing an end to commercial whaling (see e.g. Hoel 1987).

As these examples indicate, exercising coercive leadership usually entails at least the risk of incurring costs<sup>12</sup>. Not only must a leader provide prospective partners with sufficient incentives to accept his own terms or with *disincentives* to refuse to go along; the more coercion that goes into forging acceptance of a certain solution, the more coercion is likely to be required to secure its *implementation* and maintenance. This points to one of the basic assumptions behind the "hegemonic stability" hypothesis<sup>13</sup>; the weaker the relative position of the "hegemon", the higher tends to be the costs incurred in providing coercive leadership - other things being equal. Consequently, a significant decline in the relative power of the leader may undermine the stability of an international regime or agreement established by means of coercion.

### 2.3. Instrumental leadership

While coercion basically comes down to imposing one actor's preferences on some other(s) - or preventing others from doing so to us - *instrumental* leadership is essentially a matter of finding means to achieve common ends. In the latter mode one actor's guidance is accepted by others either because they become convinced about the (substantive) merits of the specific "diagnosis" he offers or the "cure" he prescribes, or because of a more or less diffuse faith in his ability to "find the way".

Instrumental leadership pervades everyday life, but it also seems to be more important in international cooperation than formal bargaining theory and "structural" realism would lead us to expect. The main reason is simply that actors quite often enter international negotiations with incomplete and imperfect information and also with tentative or vague preferences (Iklé 1964:166f). Whenever this is so - and some

---

<sup>12</sup> In this regard there is an important difference between "positive" and "negative" coercion: Promises entail costs if they *succeed*, threats are costly if they *fail*.

<sup>13</sup> Another basic assumption is that regime *preferences* is a function of a nation's relative *power*. More specifically, a decline in relative economic strength is assumed to weaken a "hegemon's" preferences for free-trade and other liberal regimes (see e.g. Kindleberger 1981; Gilpin 1987:chpt. 3). The relevance of this argument to other ("non-liberal") kinds of regimes is not clear.

of the "new" problems of environmental degradation, including that of global climate change, are evident cases in point - *diagnosing* the problem, and *discovering, inventing* and *exploring* possible solutions are likely to be important elements of the process (see e.g. Winham 1977; Haas 1990). To the extent that problem-solving efforts involve search, learning and innovation there is also some scope for instrumental leadership.

In general, instrumental leadership seems to be based on three categories of capabilities: *skill, energy, and status*. At least skill and energy may for all practical purposes be considered *necessary* conditions for success; Snidal (1990:345), for example, talks about the need for a "...conjunction of resources and initiative". And the aggregate impact of the two seems to be largely "multiplicative" (S·E) rather than "additive" (S+E) (Sorrentino & Boutillier 1975). Since all three can be ascribed also to *individuals*, the instrumental mode of leadership is one to which also (representatives of) small countries can aspire. In some respects, notably when it comes to mediation, representatives of small countries may even find themselves in an advantageous position compared to their great power colleagues. We should, however, realize that effective instrumental leadership often requires a substantial amount of human resources. The fact that it took Norway and Sweden large-scale research programs and years of campaigning to convince other European countries to take acid depositions as a serious environmental problem can illustrate the point. Everything else the same, therefore, the smaller and poorer the country, the more rarely can it (afford to) mobilize the amount of expertise and diplomatic activity needed to play a leading role, even in purely instrumental terms.

Instrumental leaders can perform several distinct functions. Inventing or designing "good" solutions is one; designing institutions or procedures whereby "good" solutions can be developed, adopted or implemented is another; and developing negotiating strategies conducive to soliciting the constructive cooperation of others is a third. In this chapter I shall explore in greater depth one aspect of the former function, viz. that of designing solutions that are *politically feasible*. More specifically, I shall explore what the scientific study of cooperation and negotiation can tell us about what constitutes a "politically feasible" solution.

### 3. Designing politically feasible solutions

Since my concern with political feasibility may seem utterly arbitrary by normative standards, a few words seem in order to clarify the relationship between this criterion and other characteristics of a "good" solution.

To qualify as "good" a solution to a joint environmental problem shall have to meet at least four (sets of) criteria: *ecological sustainability*, *economic efficiency*, *fairness*, and *feasibility*. A "good" regime should first of all induce behavior that is ecologically sound or sustainable. Second, a regime should induce allocations that are economically efficient. Not all ecologically sound regimes will do so. Third, a "good" solution should distribute costs and benefits in a way that is recognized as "fair" or "just". Not all regimes that provide for efficiency will also produce "fair" distributions. Finally, if a solution is not only to be invented but also established and implemented, it will also have to be *feasible* - politically as well as technically. This is where the study of negotiations and cooperation may contribute. From a normative perspective, of course, the criterion of political feasibility is clearly a secondary concern; its normative status rests entirely on its *auxiliary* function of enabling actors to accomplish as much in terms of one or more of the other criteria as "circumstances" permit. This auxiliary function is nonetheless an important one; there is a priori no reason to assume that any solution attractive by efficiency or even fairness standards will distribute costs and benefits in such a way that it can be adopted through voluntary agreement.

#### 3.1. What constitutes a politically feasible solution? The text-book answer

What can be accomplished through collective decision-making processes may generally be seen as a function of three basic determinants: the institutional setting (determining the set of actors, the agenda, the venue and time of meetings, and the "rules of the game"), the configuration of actor preferences, and the total amount as well as the distribution of relevant political resources, including the elusive asset of skill. In exploring the political feasibility of a potential solution, we normally accept all these factors as exogenously determined<sup>14</sup>, and ask three main questions: (1) What are the *minimal* requirements that a solution shall have to meet in order to be

---

<sup>14</sup> This assumption serves a purely analytical purpose; it is not offered as a description of the constraints typically faced by instrumental leaders. A political entrepreneur *need not* accept preferences and institutions as given parameters; in fact, he may work to modify both.

adopted and implemented under these circumstances? (2) What is the *maximum* (in terms of some other criterion) that we can hope to accomplish? And, (3) how would we design a solution if our only concern were to maximize its chances of being adopted and implemented<sup>15</sup>?

International cooperation is essentially a voluntary affair. Accordingly, most cooperative projects shall have to pass the most demanding of all decision-making rules, viz. agreement (unanimity). Given this constraint, how would we answer the three questions formulated in the preceding paragraph?

According to what might be called "standard text-book wisdom", the *critical minimum* may be defined as follows: To be "adoptable", a solution must be subjectively *integrative*. A *strongly* integrative solution can be defined as one preferred by all parties to the best alternative that is unilaterally accessible (labelled BATNA by Fisher & Ury (1981)), while a *weakly* integrative option is one preferred by at least one party and not considered inferior to any unilaterally accessible solution by any prospective partner. When three or more actors are involved, the answer becomes slightly more complex. To be established by unanimous decision among a given set of actors ( $N > 2$ ), a solution must not only be integrative but also belong to the "core", i.e. not be inferior to any solution that can be established by some subgroup of actors (see e.g. Riker & Ordeshook 1973:134f). To be successfully *implemented* as well, a solution must also be able to survive the encounter with the problem it has been designed to solve. A solution satisfying this requirement is said to be *stable*. The stability of a cooperative arrangement depends in essence on the extent to which incentives to defect are absent or effectively curbed.

The *maximum* of joint benefits that one can hope to achieve through agreement is a *Pareto-optimal* solution. The Pareto frontier is reached when any further improvement for one party will have to take place at the expense of one or more of its prospective partners - each of whom can refuse to go along.

Finally, the general recipe for *maximizing political feasibility* is to design a project so that marginal net gain is allocated wherever it contributes most to increasing the aggregate relative power or influence of the set of actors supporting the

---

<sup>15</sup> Note that these are *two* sets of requirements, one pertaining to adoption, the other to implementation. In fact, some of the techniques that can be used to facilitate agreement - e.g. despecification of commitments, and issue linkage - tend to gloss over some persistent disagreement. Conflicts unresolved during the negotiations are quite likely to become re-activated and strain the process of implementation.

measure in question. This principle implies paying particular "tribute" to actors that are (a) pivotal, and (b) not firmly committed to one particular alternative. In the special case where decisions are to be made through agreement among parties equal in power, political feasibility will be maximized if marginal cost is distributed in proportion to marginal gain. Only if this requirement is met will the interests of each party correlate perfectly with that of the group as a whole (Olson 1968:30-31).

The latter formula has the advantage of being also a device for maximizing efficiency. The general recipe for maximizing political feasibility will, however, often lead to solutions that are unattractive by efficiency as well as fairness standards. Conversely, there is no reason to assume that a solution scoring high on the latter criteria will also distribute costs and benefits in such a way that it can pass the test of feasibility. Thus, a legal standard prescribing equal conduct by all parties (for instance, a reduction of certain emissions by x per cent over n years) will sometimes impose the most heavy burden on those having the weakest incentives to contribute. The greater the difference in marginal abatement costs or in marginal damage costs, the less likely that a legal standard will produce integrative outcomes. In order to achieve a politically feasible solution some kind of *differentiation* of behavior must often be permitted (see e.g. Underdal 1980; Sand 1990)<sup>16</sup>. Similarly, regulatory techniques designed to manipulate actor incentives (e.g. taxes, fees or transferable licenses) often impose the highest costs on those least able to pay (e.g. Third World small-scale producers relying on older generation technologies). If we want to combine efficiency with feasibility and can find no option distributing marginal costs in (rough) proportion to marginal gain, the general advice would be to look for (a) solutions leaving the distribution of costs and/or benefits indeterminate, or (b) some way of "decoupling" the question of who should *do* what from the issue of who shall have to *pay* how much of the costs<sup>17</sup>.

In formulating the basic "text-book" answers above I considered the set of participants to be an exogenously given parameter. Good reasons can be given for

---

<sup>16</sup> This applies to efficiency as well. However, the *pattern* of differentiation required to achieve efficiency may be quite different from that required to make solutions politically feasible.

<sup>17</sup> For example, measures to protect tropical ecosystems will obviously have to be undertaken in and by nations in the tropical zone, but unless other nations are ready to pay a significant share of the costs involved, the level of protection actually achieved will almost certainly be suboptimal from a global perspective.

relaxing that assumption. Instead of asking what characterizes the set of solutions on which a given set of actors can agree, we might ask what characterizes the set of solutions or projects that can *somehow* - i.e. by *any* set of actors - be established through voluntary cooperation (cf Hovi 1988). The answer to the latter version of the question will, of course, differ from that given to the former only in cases where a particular solution can be established also by some subset of actors. Fortunately, such a possibility does sometimes exist. This is definitely so with regard to *capabilities*. Even for some of the major global problems, such as the impact of human activities on ozone depletion and global climate change, a fairly small number of states would among themselves have sufficient capabilities to undertake effective action. The major obstacle is likely to be incentives rather than capabilities. When faced with externality problems such as transboundary pollution or depletion of common property resources even the most concerned governments will prefer and probably also demand that others contribute to the efforts, or at least that others do not actively take advantage of their own sacrifices. Other things being equal, the more intense the economic competition between two societies, the more sensitive each of them is likely to be to the *relative* costs of environmental policies.

Assume, now, that each actor is willing to contribute to a certain project if and only if his prospective partners (considered as a group) pay a certain minimum of the total cost. Let me refer to the critical minimum required by actor  $i$  as  $k_i$ . If we conceive of the threshold as a certain fraction of total costs, then presumably  $0 < k_i < 1$ . We can now determine the minimal set of participants that is needed to establish a project by proceeding as follows:

First, find the critical minimum of cooperation that each actor requires from his prospective partners. Admittedly, this may not be a simple and straightforward operation. For one thing, an actor may differentiate his demands upon others. Thus, the EC has made its new CO<sub>2</sub> tax contingent upon an "equivalent" move from the US, but not upon any contribution from any developing country. Another complication is that an actor may not conceive of his choice as simply one between "contributing" and "not contributing". Rather, the interesting question will often be *how much* to contribute, and the answer to that question may be conceived of as a non-linear function of the amount of effort contributed by others (in absolute as well as relative terms). But even if we are forced to abandon the notion of one simple and exact "k" value, the fact remains that governments frequently pursue some policy of *conditional*

cooperation. And often it will be possible for the observer to get at least a rough impression of what those conditions are. With such information we have a basis for the second step; viz. identifying the (sub)set of *pivotal* actors.

The extreme cases are unambiguous: Any actor without whom none of the others would go ahead is obviously pivotal to the project. It is also clear that any actor whose contribution is not required by any of its partners can not be pivotal. The reasoning becomes more complex if an actor is critical to one or some of its partners, but not to all. The general rule is that in order to be pivotal to the project the contribution of an actor must - by itself or in combination with the contribution(s) of any party or parties for whom its participation is a *sine qua non* - be necessary to ensure the contribution of some other pivotal party<sup>18</sup>.

A brief look at a hypothetical case may help clarify the reasoning behind that proposition. Assume that four parties - A, B, C and D - get together to work out a solution to some collective problem. The contribution of A is by itself critical to B, but not to C or D. In determining whether A is pivotal to the project, we ask, first, whether C and/or D would be prepared to go ahead without B, and also without A+B. If neither C nor D would do so, A is pivotal to the project - although only indirectly, i.e. by being in a position to set in motion a chain of "falling dominos". If C and D are both ready to undertake the project without B, A is not pivotal by its own weight. But since B's contribution depends on A's, we also have to consider what would happen if neither A nor B joins. If C and D both find the project still to be worthwhile, we may conclude that the combination A+B is not a pivotal one. If only one of the remaining partners - say D - can tolerate the defection of both A and B, the critical question becomes whether he can accept the loss of C as well. If not, A is indirectly pivotal. If, however, D should be prepared to undertake the project all by himself, none of his prospective partners can be pivotal - individually, or considered as a group<sup>19</sup>.

---

<sup>18</sup> The pivotality of an actor is likely to be not merely a function of the tangible costs of its defection to prospective partners, but also a matter of its symbolic significance, particularly in relation to notions of fairness and equity.

<sup>19</sup> The notion of pivotality is important also to the building of *coalitions*. Information about whose contribution(s) is (are) considered critical by whom provides a basis for "strategic sequencing", i.e. determining the sequence in which potential coalition partners should be approached (for the general argument, see Lax & Sebenius 1991:173f). If, for example, a contribution from B is critical to C but not vice versa, then it seems wise to try to secure the support of B before approaching C.



We can now see that the critical minimum of cooperation (measured in terms of participants or aggregate amount of contributions) that is required to accomplish a project is *the lowest level that satisfies the "k-value" of the most "demanding" pivotal actor*. Within the (sub)set of pivotal actors, the general answer offered at the beginning of this section applies.

### 3.2. Some critical questions

What I have called the "standard text-book answer" and the kind of refinement made above all build on a simplistic conception of negotiation as a "politics-free" game whereby unitary rational actors make a collective choice from a given set of options. This conception is no doubt "...peculiarly conducive to the development of theory" (Schelling 1960:4), but it is also inadequate as a basis for the practical engineering of international cooperation. In order to see why, let me introduce some further complications:

The reasoning above is based on two questionable assumptions; viz. that actors have a precise and definite *resistance point* (Walton & McKersie 1965:41), and that the best solution that is individually accessible (or accessible to some subgroup that can feasibly be formed) constitutes this resistance point. The notion of a precise and definite resistance point is, however, an analytical construct. Available evidence strongly suggests that governments quite often - particularly in complex settings - enter negotiations *without* any explicit decision about what the critical minimum is going to be. A government can normally point to some solutions that it will definitely not accept, and identify others as fully satisfactory. But in-between there will often be a grey zone of "may-bes" - i.e. solutions that it *might* accept, depending on what the "circumstances" are. The precise resistance point that we are led to search for may be something which can at best be determined *a posteriori*.

More important here is the question of whether we can confidently assume that the critical minimum that an actor will settle for is his BATNA. I shall argue that equating the two may lead a political entrepreneur to *underestimate* the challenge he is facing, or possibly to ignore tactical opportunities created by the process itself.

It seems that governments typically enter international negotiations with some more or less clear idea as to what they would like to achieve and what will qualify as

a *satisfactory* outcome<sup>20</sup>. These are highly subjective standards, quite likely to be adjusted as the process develops (Iklé 1964:165f). Accordingly, they tend to be elusive subjects of study. Suffice it here to say that standards of satisfaction are, it seems, most often based on the actor's own notion of what he "deserves" (Thibaut & Kelley 1965:21) or "needs". Ideas about what one "deserves" or is "entitled to" will often be based on some kind of comparison with other salient outcomes, such as those obtained on earlier occasions or by other actors in a similar position (Thibaut & Kelley 1965:80). They may, however, also be derived from some general principle or norm. Particularly in the latter case, aspirations may be "unrealistically" high. The demands made by the G-77 for a New International Economic Order may be a case in point (Rothstein 1984). "Needs" are usually defined in terms of what is required to achieve some substantive objective (such as preventing further depletion of stratospheric ozone), or with reference to "political" aims (notably those of obtaining ratification and staying in power). The important point to be made here is that - whatever their contents and genesis - subjective aspirations seem to constitute an important standard of evaluation. If so, they may provide an important key to understanding actor behavior.

If I am right that actors have at least *two* benchmarks against which possible solutions will be evaluated - BATNA and some subjective standard of satisfaction - a crucial question for the entrepreneur becomes which of the two constitutes the feasibility limit. A tentative answer may be summarized in four propositions:

1) Presumably, an actor will not accept a solution that it considers inferior to its BATNA, even if it would be satisfied with less. However, the possibility cannot be completely ruled out.

2) A government is likely to be reluctant to accept a solution that fails to meet its standard of satisfaction, even if the solution is superior to its BATNA. More precisely: an actor is unlikely to accept any solution it considers unsatisfactory as long as it sees some real hope of reaching a better outcome. When no hope of further improvement can be sustained, a government *may* in the end accept a solution that it considers unsatisfactory - provided that it is better than BATNA - but there is no guarantee that it will. And even if it decides to settle for such a deal it is likely to

---

<sup>20</sup> These are two different levels of ambition. The former corresponds to what Walton & McKersie (1965:42) label "target", while the latter seems to be roughly equivalent to the concept of "comparison level" as defined by Thibaut & Kelley (1965:21/81f).

become an uneasy partner, continuously looking for opportunities for re-negotiation or, perhaps, for other partners. The general implication is, of course, that a political entrepreneur should take subjective aspirations seriously, and look for some way of modifying expectations that can not be satisfied.

3) A solution that is believed to be (a) better than BATNA and (b) satisfactory is also fully *acceptable*. An actor may, however, not be ready to accept it *yet*. Even an actor fully satisfied with current achievements may continue his search for an even better deal. The amount of energy spent on further search is, however, likely to decline sharply once the satisfaction level is reached.

4) Only a *ripe* solution - i.e. one considered to be (a) better than BATNA, (b) satisfactory, and (c) leaving no room for (significant) further improvement - provides a basis for immediate agreement.

The core of the argument is summarized in table 1:

Table 1: Hypothesized responses to different kinds of solutions.

		BETTER THAN BATNA?			
		No		Yes	
SATISFIED?		Hopes of improvement?		Hopes of improvement?	
		No	Yes	No	Yes
	Yes	Reject and withdraw	Continue search	Accept (now)	Continue, but be ready to accept
No	Reject and withdraw	Probably continue	?	Continue search	

This brief elaboration may suffice to alert us to two implications of substantial interest for the design of politically feasible solutions. First of all, the critical minimum can be determined with confidence only on the basis of information about subjective ambitions and standards of satisfaction. If ambitions are high, a minor improvement over BATNA may not be sufficient to have a solution accepted. Second, the *timing* of a proposal may be critical. Premature introduction might in fact spoil a solution that could have provided a basis for agreement later. To see why, recall proposition (3) above: An actor who decides to continue negotiating for a better deal can hardly *at the same time* accept the terms presently offered, even if that solution would be better

than BATNA and also meet his standard of satisfaction. And the act of rejecting a certain option - even if only for the tactical purpose of giving credibility to its search for a better deal - tends to make that solution harder to accept at a later stage.

It now remains to explain *why* a government may deliberately reject a solution that it believes to be superior to the best available alternative (or, possibly, consider accepting one that it believes to be inferior to its BATNA). The clue is to be found in the concept of *process-generated stakes* (Underdal 1983:190-1). These are costs and benefits pertaining to behavior itself, and either inherent in a particular setting or generated by previous moves. In more operational terms process-generated stakes can be conceived of as the difference between the utility ascribed to the act of *making* a certain move and the utility associated with the direct *impact* of that move upon the substantive outcome of the process.

Most fundamentally, the significance of process-generated stakes can be seen in the fact that human *decisions* tend to be evaluated by standards different from those applied to *outcomes* being "acts of Nature" or products of quasi-mechanical systems such as markets (see e.g. Lane 1986). A decision is a deliberate act expressing the *will* of the decision-maker(s). Accordingly, it is something for which one or more specific actors can be held accountable. Admittedly, the outcome of a *collective* decision-making process may be different from what some or even all participants had as their most preferred solution. But whenever joint decisions are made by explicit consensus, each party signing the agreement thereby gives its consent and assumes at least some responsibility for the outcome. If the solution fails to meet the government's aspirations (or those of its constituency), it may very well find that the act of explicitly accepting the deal implies political costs that outweigh the marginal improvement in substantive terms obtained over BATNA.<sup>21</sup> In such a situation it could be perfectly sensible *not* to settle for the best substantive solution that it can obtain. More generally, actors are likely to have their performance evaluated not only on the basis of the final outcome achieved, but also in terms of the way they play the game. And they may respond to both sets of expectations (Walton & McKersie 1965:304),

---

<sup>21</sup> Presumably, a government would accept an "unsatisfactory" solution ( $S_a$ ) if, and only if, the following condition is fulfilled:

$$S_a - q_a(SL_a - S_a) > W_a^0,$$

where  $SL_a$  is the country's satisfaction level,  $q_a$  is the governments "sensitivity coefficient" to "failure" (presumably,  $1 < q_a < 0$ ), and  $W_a^0$  is its BATNA. Moreover, recall that the equation is based on the assumption that  $SL_a > S_a$ .

Another key to understanding process-generated stakes is the distinction between what might be labelled "primary" and "secondary" effects of negotiation behavior. In international negotiations a move can rarely achieve just *one* purpose; it is likely to have some side-effect that will show up as potential costs or benefits at some point in the process. Take, for example, the act of moving one's position closer to that of the other party. In itself, this is a positional or "basic" move (Snyder 1972:222f) reducing the distance that remains to be overcome. But the actor would be well advised to look for "communicative" side-effects as well. At least he should ask himself how the other party is likely to interpret such a move in the present context. Thus, it can make a significant difference whether he expects his opponent to read the move as a concession, attributable to the opponent's own firmness, or as an act of accommodation, reciprocating "favors" received earlier in the process (cf Pillar 1983:chpt.3). In the former case, the strategic lesson inferred by his opponent would be "stand firm", in the latter something like "pursue mutual accommodation". We can easily see that fear of running into the former "trap" may lead an actor to abstain from making a move that would be perfectly sensible evaluated on the merits of its primary effects only. Thus, we should recognize that there is a significant difference between *preferring* and *accepting* or *proposing*. Similarly, communication moves may have "positional" side-effects. For example, arguing strongly against a certain option implies some degree of commitment, adding new political costs to the act of accepting that option later in the process.

Now, process-generated stakes may also provide *positive* opportunities. International conferences often provide opportunities as well as incentives for governments to demonstrate good will and make constructive efforts to come up with new initiatives. Thus, the fact that the "Earth Summit" in Rio de Janeiro served as a focal point of attention for actors concerned with environment and development issues did probably generate *some* pressure on many governments to "perform well" in the eyes of those particular segments of the attentive public. This desire to "do well" might lead a government to accept or advocate measures it would otherwise not have supported. (Most likely, though, such an extension of an actor's "acceptance zone" will be marginal.)

Summing up, we may conclude that the presence of process-generated stakes implies that equating a government's "resistance point" with its BATNA may lead the political entrepreneur to underestimate the challenge he is facing, or - probably more

rarely - to overlook tactical opportunities created by the process itself. One important implication of this proposition is that designing substantive solutions is only one component of the entrepreneurial challenge; he should also be concerned with devising a *path* that can lead actors there. And the latter task may be as intricate as the former.

### *3.3. From conceptual formulas to practical applications*

In order to apply these constructs and propositions to the design of solutions to specific empirical problems we need to know the subjective utility or value ascribed by each actor to alternative outcomes. What we actually have is usually some estimate of consequences measured in terms of objective "realia", such as the amount of cutbacks required in the emission of certain pollutants, emission or production quotas, emission charges, etc. In addition, we may know the official positions taken and the arguments submitted by the actors themselves. Both kinds of data may provide important clues, but neither is a reliable indicator of subjective utilities. Assume, however, that we have decided to try to infer utilities from data about the material consequences of alternative options. The task then becomes to determine how actors go about ascribing subjective value to whatever consequences they expect to flow from different policy options.

---

The default option is to assume that each actor will conceive of subjective utilities as a linear or at least a monotonous function of the amount of goods it obtains or sacrifices. This assumption provides us with a straightforward operationalization, attractive particularly for purposes of extensive research. It is also one that can be defended as being at least as valid as any other equally simple solution. On closer examination, however, we realize that several of its more specific implications can be accepted only as very crude approximations. Suffice it here to consider two of the assumptions implicit in this approach; viz. those about motivational orientations and the domestic aggregation of preferences.

#### *3.3.1. Does each government care only about the pay-off to its own nation?*

The assumption conventionally made in rational choice analysis is that each actor cares only about his own pay-off; what happens to others does not enter his evaluation of alternative solutions. This assumption is so common that students sometimes take it to be a defining characteristic of 'rationality'. It can probably also

be defended as corresponding better to reality than any other equally simple assumption. Yet we would certainly not accept it as an accurate description of how governments typically go about evaluating policy options in international negotiations. Governments are, it seems, most often *not* indifferent to the pay-offs obtained by others. The interesting question is not *whether* governments tend to take the welfare of other nations into account, but rather in what circumstances, to what extent, and *how* they do so.

In addressing that question the practitioner needs not resolve the philosophical issue of whether governments are in some profound sense driven by pure egoism or not. What he needs to know is which orientation he shall have to deal with in a specific context; whether that approach is being pursued on its own merits or used as an instrument to achieve some ulterior motive is a matter of practical significance only in so far as it affects the size and shape of the settlement range. This should be good news to the entrepreneur, because "tactical" altruism will often be very hard to distinguish empirically from the genuine concern for the welfare of one's prospective partners<sup>22</sup>.

Research on international negotiations has so far provided only bits and pieces of empirical evidence showing how decision-makers actually go about evaluating policy options. Let me nonetheless, in a summary fashion, offer my interpretation of available evidence:

1) Actors in international negotiations tend to evaluate options in partly comparative terms.

The crux of this formulation is the word "partly". It is used to suggest (1) that actors typically consider their own pay-off *as well as* the pay-offs obtained by others (mixed orientation); and (2) that actors may be indifferent to the achievement of *some* prospective partners, on some issues, and within some range of pay-offs, but rarely if ever to *all* parties, on all issues, and with regard to the full range of potential

---

<sup>22</sup> Sometimes it may even be hard to determine whether an observed pattern of behavior is derived from a certain motivational orientation or from a certain structure of the interdependence relationship. Thus, a state may promote the interests of another out of genuine or tactical concern for the latter's welfare, but also - if their interests are positively linked - as a side-effect of working for its own self-interest. Conceptually, however, the distinction is clear: motivational orientation is a question of the *criteria* used in evaluating policy options; the correlation of interests is a function of the *structure* of an interdependence relationship.

outcomes. Each government is likely to have some "zone of indifference" where it evaluates outcomes in strictly individualistic terms. But in some respect and at some point its notion of what qualifies as a "satisfactory" or "good" solution will take some account of what others obtain or demand.

2) Two *forms* of comparative evaluation seem to be particularly common in international negotiations: "defensive competitiveness" and "constraining altruism". These two perspectives are not only mutually compatible, but also to some extent derived from the same basic concern.

A competitive orientation is conventionally defined as a strive to maximize one's own pay-off relative to that of one's opponent(s). Thus, if actor A adopts a competitive approach towards B, A would try to maximize  $(U_a - U_b)$ , or possibly  $(U_a/U_b)$ . The defensive version suggested in proposition (2) portrays actors as being concerned with *not losing* rather than with "winning". The general function would be of the form

$$U_a = V_a - k_a^b(V_b - V_a),$$

where  $k_a^b$  is A's "coefficient of competitiveness" towards B, and  $V_a, V_b$  is the "pay-off" to actors A and B respectively (cf. Grieco 1988: 500).<sup>23</sup>

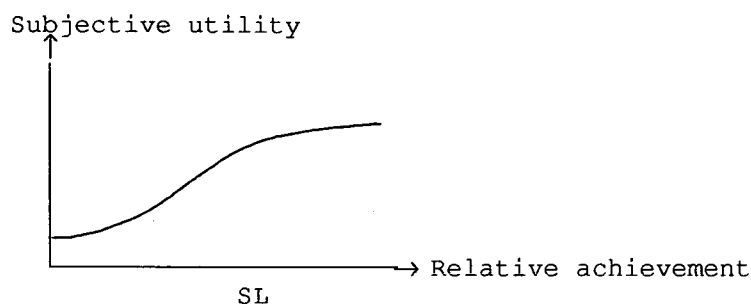
The notion of defensively competitive behavior is linked to the concept of "satisfaction level" introduced above. We assume that actors develop some more or less clear idea about what will qualify as a "satisfactory" solution, and that this level of satisfaction typically will be defined in absolute as well as comparative terms. If an actor adopts a defensively competitive perspective his subjective utility tends to decline sharply as his pay-off falls below his "comparison standard". On the other hand, once this level is reached the marginal utility of further improvement in *relative* terms also tends to decline, though probably less sharply. The general pattern is indicated in figure 2.

---

<sup>23</sup> This formulation is inspired by Grieco's concept of "defensive positionality", but it differs from his in some respects - the most important being that his notion is derived from the assumption that in an anarchical system each state will have to be concerned about relative power as a means of protecting its own security, while mine is derived essentially from assumptions about the nature of domestic politics.



Figure 2: The defensively competitive orientation: subjective utility as a function of relative achievement. (SL = satisfaction level)



What I have called a "defensively competitive" approach is a benign version of the competitive orientation. Similarly, the kind of cooperative motivation that seems to be most frequently encountered in international negotiations is a weak one. It can most accurately be described as a set of soft *constraints* on the pursuit of self-interest. The term "constraints" is used to indicate that the norms and principles in question need not be actively pursued by everyone or even by a majority of actors. Rather, the basic assumption is that most governments and states (tacitly) do recognize certain ethical principles and norms as valid or legitimate, so that at least *if seriously challenged* to honor one of these, they will do so - unless they are able to counter by invoking some other principle of equal or higher status. In fact, there are numerous indications that governments *do* accept certain principles and norms as valid even when the immediate implications are to their own disadvantage.<sup>24</sup> Thus, it seems clear that all governments in the rich parts of the world do accept the principles of "blame" and "capacity" (see table 2) as valid criteria for distributing the costs of measures to reduce the emissions of "greenhouse gases", even though these principles clearly would leave their nations with the lion's share of the bill. And although probably exploiting these principles for tactical purposes, there can be no doubt that most LDC leaders strongly subscribe to these criteria, at least in this particular context. Young takes the general argument even further, suggesting that "Equity...is an immediate concern that evokes strong feelings on all sides" (1989a:369), and that actors in international regime negotiations tend to be more concerned with equity than with efficiency.

---

<sup>24</sup> Experimental evidence suggests that this applies to individual behavior as well (see e.g. Kahneman, Knetsch & Thaler, 1986).

More empirical research is needed to determine the actual status of different principles and norms in intergovernmental negotiations. But among those that seem to be frequently invoked and rarely if ever explicitly disputed are certain basic rights (including some fundamental human rights and the right of states to exercise their national sovereignty) and certain general notions of equity, including those listed in table 2.

Table 2: Four general principles of equity.

Objects to be distributed			
Focus on		Costs	Benefits
	Cause	Blame	Reward
	Effect	Capacity	Need

Briefly, the principle of "blame" implies distributing the *costs* of solving a particular problem in proportion to one's relative "guilt" in causing or aggravating it (as in the Polluter Pays Principle<sup>25</sup>). The principle of "reward" requires that *benefits* be distributed in proportion to each party's relative contribution to providing a certain good. Similarly, the principle of "capacity" implies that the costs of a project be distributed so that the marginal costs of the parties are equalized (as in progressive taxation), while distributing benefits according to "need" is a device for equalizing the marginal *utilities* derived from a scarce good.

In addition to these and other general principles of equity, several norms and principles specific to the issue-area in question may be invoked. In the area of environmental management the latter category includes notions such as the "common heritage of mankind", the proviso of "sustainability", and more radical conceptions of moral imperatives, giving the rights of Nature priority above the welfare of Man. As can be seen in discussions about whaling and the appropriate regime for Antarctica, preservationist ethics pose a particular challenge to traditional notions of resource management and also to the use of cost-benefit analysis as a tool for environmental policies more generally.

---

<sup>25</sup> The official rationale behind the application of the PPP at the international level refers, though, mainly to considerations of economic efficiency (see e.g. OECD 1975).

We can now see that the two modes of comparative evaluation sketched above *may* be derived from the same basic concern. A defensively competitive approach may, at least in part, be a response to the risk of becoming subject to "unfair" treatment oneself. The recognition of normative constraints on the pursuit of self-interest can be seen as an acknowledgement that the rights and principles that one would like to be able to invoke oneself may legitimately be invoked by others as well. As interpreted above, the two evaluation perspectives are therefore to a large extent complementary rather than mutually exclusive.

3) The relative weight given to different evaluation perspectives is likely to depend on a number of circumstances, including the overall affect "load" in the relationship, the relative strength of one's partner/-opponent, and the domestic position of the government or regime itself.

Other things being equal, the more friendly the overall relationship, the weaker the relative position of one's partner or opponent, and the more secure its own domestic position, the more likely a government is to lean towards a cooperative orientation. Conversely, a government is likely to lean towards a competitive mode of evaluation if the overall relationship is characterized by hostility, if the opponent is about equal in terms of size, wealth and other characteristics that may serve as criteria for distribution, and if the domestic position of the government is weak and insecure.

### *3.3.2. Do governments pursue **national** interests?*

Strictly interpreted, the default option of conceiving of subjective utility as a monotonous function of the physical goods or economic value obtained or sacrificed requires either one single decision-maker (a "dictator") pursuing the objective of maximizing net national pay-off, or some pluralist system distributing influence over policy decisions in proportion to the impact of these decisions. Neither of these assumptions provides a generally accurate description of the policy-making process. And they become particularly questionable when applied to issues characterized by certain asymmetries between costs and benefits. Environmental management is a case in point.

Environmental degradation most often occurs as a side-effect of perfectly legitimate activities undertaken for other purposes, such as e.g. industrial or

agricultural production, transportation of people and goods, etc. The benefits derived from these activities are concentrated to specific social groups, certain, immediate, and often of great importance to those concerned. By contrast, side-effects in the form of environmental damage are often widely spread or indeterminate, uncertain or even unknown, distant in time and/or space, and for most victims a marginal concern. Other things being equal, we would clearly expect the former kind of consequences to generate more political energy than the latter. No wonder that the political organization of most societies has a strong institutional bias in favor of *producer* concerns and interests.

As the environmental impact of human activities became more pervasive and better understood, at the same time as increasing affluence led Western societies to shift their "indifference curves" in favor of environmental quality, the demand for policies that could "restore the balance" increased. And governments responded; new and more strict laws and regulations were passed, specialized institutions for environmental management were established or strengthened, and budgetary appropriations for conservation purposes increased. But as the problem to be solved is essentially a side-effect of other activities, environmental policy can not simply be *added* to other policy commitments. The success of environmental policy depends to a large extent on its ability to *penetrate* those activities that cause damage to the environment. Effectively integrating environmental concerns as premises in the making of decisions regarding these activities themselves usually requires more political energy and institutional capacity than merely having a new commitment added to the public agenda. This is so because the activities to be modified are in most cases well established systems or patterns of behavior, governed but also protected by their "own" rules and institutions, and sustained by real self-interest on the part of consumers as well as producers. The development of environmental policy therefore tends to follow a pattern characterized by a substantive gap or at least a significant time lag between declarations of intentions and general policy doctrines on the one hand and "significant deeds", particularly those impinging upon established policies, institutions and activities, on the other<sup>26</sup>. More energy is usually required to *change* established policies or institutions than to maintain the status quo. And the

---

<sup>26</sup> A few issues acquiring high symbolic significance are likely to stand out as exceptions confirming the general pattern.

"periphery" of established policies and arenas is more easily conquered than the "core" (cf Majone 1989:chpt.7).

The same mechanisms also affect the development and implementation of international agreements, particularly those pertaining to complex global problems. To indicate how, I shall first offer a very brief outline of what seems to be the typical pattern of development of public policies, and then explore more explicitly some of the basic assumptions upon which the general argument is premised.

Imagine a UN conference convened to work out a joint program of action to cope with some problem of global environmental change. In the initial stages of intergovernmental policy-making, discussions about problem "diagnosis" and possible solutions are likely to be framed in rather general terms. The problem itself is truly global in its ramifications, and the policy options being discussed at this stage are likely to be quite general, and the domestic distribution of costs and benefits to a large extent indeterminate. So far, the issue can legitimately be claimed to fall largely within the domain of the Ministry of the Environment and, perhaps, the Ministry of Foreign Affairs. As policy ideas are further developed and specified, however, it becomes increasingly clear that many of them will have substantial consequences for one particular sector of the economy or some distinct social activity. On their own merits, these measures would normally fall largely within the domain of "sector" ministries or agencies. Moreover, they are likely to activate the "clients" concerned and their organizations and representatives. Over time, this re-definition of the issue and the "take-over" by specialized sector agencies are likely to reinforce each other. Gradually, what started out as a "grand design" to cope with a major collective problem is likely to become decomposed and redefined into "micro-issues" of sectoral policy (industry, agriculture, transportation etc.), and "captured" by the institutions and segments normally in charge of such issues. And seen from the latter perspective the policy measures in question will most often look considerably less attractive or urgent than they did when seen as integrated parts of a more comprehensive environmental program. As a consequence, there is a serious risk of ending up with what might be called a *vertical disintegration* of policy (Underdal 1979:7); i.e. a state of affairs where the aggregate thrust of "micro-decisions" deviates more or less significantly from what policy doctrines and principles would lead us to expect.

<sup>27</sup> I am referring to the *Norwegian Foreign Policy Behavior* file, including events data for Norway covering selected periods from September 1978 through November 1986 (altogether 19 months and 1989 events). For further information, see Underdal 1987.

This is not the place to test these assumptions. Suffice it here to point out that a look into what may be the most relevant events data file available produce findings that are at least consistent with  $A_1$  and  $A_2$ <sup>27</sup>. Thus, policy specificity is indeed correlated with salience to some particular subgroup(s) (Pearson  $r=.15$ ), and the correlation remains significant ( $p < .01$ ) also when we control for issue-area (beta = .14). The support for  $A_2$  is more direct and fairly strong: What might be called the "domestic scope coefficient", defined as [issues with "national" ramifications - subgroup(s) issues/total], is .68 for the MFA and .86 for the Ministry of the Environment, compared to -.18 for ministries and agencies managing one particular sector of the economy, and -.33 for business, labor and professional NGOs. Also when we control for substantive problem area and other issue variables, "sector" agencies as well as

- (A<sub>1</sub>) The more specific the policy measure that comes up for decision, the more determinate and differential tends to be its impact on society.
- (A<sub>2</sub>) As subgroup concentration of issue salience increases, the involvement of sector agencies and interest organizations tend to increase, while the roles of actors with more "holistic" responsibilities - including the Ministry of Foreign Affairs and the Ministry of the Environment - tend to decline.
- (A<sub>3</sub>) "Where you stand depends on where you sit" (Allison 1971:176). In other words, different actors tend to bring different perspectives and decision criteria to bear on a problem, and these perspectives are to a large extent shaped by formal role (for governmental agencies) or "structural" position (for non-governmental actors).
- (A<sub>4</sub>) The outcome of a decision-making process may depend on the character of that process, notably on the patterns of participation and influence.

The general argument implicit in this scenario is based upon a set of assumptions about policy-making processes. At least four of these assumptions deserve to be formulated explicitly:

interest organizations tend to play a significantly larger role in events salient primarily to some subgroup(s) than in issues of "national" significance<sup>28</sup>.

A<sub>4</sub> can be specified with the help of a simple two-dimensional matrix suggested by Wilson (1973:331f; see table 3). Under conditions of low politicization ("business as usual"), we would expect the decision-making process to produce a bias in favor of policy measures belonging to cell 2, and "too little" of policies leaving one specific sector or subgroup of society with a disproportionately high share of the costs (cell 3). This is so particularly if the measures in question require a radical change in established patterns of behavior or "entrenched" rights, rules or institutions. Conversely, under conditions of strong political mobilization we would, at least in democratic political systems, expect a bias in favor of the interests or values of the majority (i.e. "too little" of category 2 policies, and "too much" of measures in category 3).

A brief look at the politics of foreign aid may suffice to illustrate the bias hypothesized for the "business as usual" scenario. Measures requiring painful adaptation from domestic industries - such as e.g. the opening of domestic markets to products from Third World countries - tend to run into fierce domestic opposition from a coalition of trade unions, industry associations and politicians representing the local communities most directly affected. Such a coalition will often be capable of blocking or at least modifying such measures. By contrast, "tied aid" - i.e. the use of government funds to purchase goods or services from domestic producers - offers a

---

<sup>28</sup> The results obtained in a multivariate analysis (MCA) with four issue dimensions as independent variables are shown below:

Issue dimension	Actor							
	MFA		Environment		Sector		Intr.org.	
	eta	beta	eta	beta	eta	beta	eta	beta
Impact scope	.19	.01	.07	.23**	.40	.27**	.41	.33**
Problem area	.27	.26**	.14	.29**	.35	.18**	.30	.12**
Values/interests	.15	.14**	.08	.24**	.24	.11**	.15	.02
Specificity	.04	.03	.08	.09*	.11	.06	.15	.10**

\*/\*\* = significant at .05/.01 level respectively. All independent variables are entered with three scores. The scope of domestic impact variable includes the scores "national" issues, issues with national as well subgroup(s) impact, and issues of particular concern to one or more subgroup(s). For problem area the categories are "security", "economic wealth", and "other". The values/interest variable distinguishes between issues referring essentially to values, issues referring essentially to interests, and those that are "mixed". With regard to specificity, the categories are "macro-policy", "micro-decision", and "mixed/ambiguous". About 800 cases were available for this particular run.

politically very potent combination of private profits and public virtue. Comparing specific "deeds" to general policy doctrines, the pattern tends to be "too little" of measures requiring painful domestic adaptation (category 3) and "too much" of tied aid (category 2).

Table 3: A typology of public policies (based on Wilson 1973).

		COSTS	
		Concentrated	Distributed
BENEFITS	Concentrated	A 1 B	2
	Distributed	3	4

*Legend: A = costs and benefits concentrated to the same group.  
B = costs concentrated to one group, benefits to another.*

In the area of environmental management, abstract policy ideas, such as e.g. the notion of "sustainable development", or even the basic principles included in a framework convention, typically belong to cell 4. At the domestic level, benefits as well as costs are to a large extent diffuse, collective or indeterminate. Specific "deeds", however, - notably those requiring some particular branch of industry to reduce the amount of environmental damage caused by its production process or by the consumption of its products - most often generate the configuration of costs and benefits found in cell 3.

The kind of analysis offered above has several implications for the craft of designing politically feasible solutions. First of all, it clearly suggests that there is a priori no reason to assume that domestic policy-making processes will generally lead to solutions maximizing net national pay-offs. The greater the incongruity between the distribution of costs and the distribution of benefits, the less likely that the domestic aggregation of preferences will lead to policies maximizing net national pay-off. Moreover, it may help us realize that securing the implementation of international agreements is not merely a matter of removing or curbing national incentives to defect. Different "levels" of policy tend to generate different kinds of decision games, involving



to some extent different (domestic) actors, with different perspectives, interests and capabilities (Allison 1971). As a consequence, vertical disintegration of policy is a very real possibility even when a government is perfectly sincere about its international commitments. "Grand designs" to deal with complex global problems seem to be particularly vulnerable to the disintegrating impact of the "micro-games".

On a more specific level, the analysis clearly suggests that from a feasibility perspective the "ideal" solution will, at least in the "business as usual" scenario, be one combining public virtue with private profits to organized interests. It is a major political handicap of environmental policy that it is relatively poor in terms of such options. Some can be found, though: In the global climate change issue, joint public investments in the development of technologies for utilizing more environmentally benign sources of energy can be one example. Another could be clean-up assistance to Russia and Eastern Europe in the form of technology purchased from Western producers, via government budgets. It is important to keep in mind that the tool-box of environmental policy includes not *only* restrictions and taxes or fees imposing costs on (specific segments of) society. Secondly, it helps us appreciate the importance of *institution-building*. Having a "progressive" principle incorporated into a framework convention *may* be a significant achievement, but there is a very real risk that - left to themselves - at least some governments will fail to deliver the specific deeds required to implement the principle. By establishing procedures and institutions for, inter alia, regular performance reviews or follow-up conferences additional "energy" can be generated and put to work on the issue. Finally, the kind of analysis undertaken above may help us appreciate the fact that designing compensatory arrangements to attract the support of states suffering a direct loss from a certain solution can be a far more delicate undertaking than the unitary rational actor model would lead us to expect. The greater the incongruity between the distribution of costs and the distribution of benefits, the more likely it seems that some kind of "distortion" in the domestic decision-making process on one side or the other will upset the deal.

#### **4. Concluding remarks**

Some may argue that notions of political "engineering" and solution "design" must be based on a misconception of the nature of instrumental leadership. Leadership is, one might argue, at least as much a matter of "art" or "craft" as of science and calculation.

Moreover, to the extent that notions of "engineering" and "design" are at all appropriate in this context, one may argue that these activities should be conceived of not as a "one-shot" application of some construct or formula from bargaining theory to a specific problem, but rather as an incremental process of trial-and-error, through which tentative ideas are adjusted and reformulated until a sufficiently broad consensus is reached.

There is substantive merit in both these lines of argument. Arguably, political leadership does rely as much upon the intuition of the artist and the experience of the skilled craftsman as upon the calculus of the engineer. Yet, it seems hard to deny that instrumental leadership *also* involves a significant element of (strategic) calculation, and that this particular aspect is somewhat more "researchable" than that of "artistic" skills. If the academic study of negotiation and cooperation can ever produce useful inputs to praxis itself, it seems more likely to do so by refining principles of calculation than by uncovering the secrets of intuition or the techniques of artwork.

Students of negotiation may be well advised to shift some of their attention from "synoptic" solution constructs to strategies of incremental adjustments. The latter approach implies rephrasing the question of solution design as follows: how can a project be adjusted and redesigned so as to make it (more) feasible? This question leads us to focus our attention on *techniques of adjustment* - including, inter alia, coupling or decoupling of issues, adding or subtracting participants, decoupling the "sum-function" of a regime from its distributive function, providing scope and incentives for cooperation to evolve incrementally, and decreasing the precision and specificity of actor commitments. But even if we adopt the incremental approach, the kind of questions that I have addressed in the preceding section of this paper would still be important to the exercise of instrumental leadership. Even in a process of trial-and-error, it certainly helps to have some idea of what characterizes the solution that we are looking for.

*Acknowledgement:* This paper is a draft of a chapter prepared for a forthcoming book, to be published by Kluwer for the European Science Foundation. Parts of the paper are drawn from two other recent articles (Underdal 1992, 1992a). In the process of working with these manuscripts, I have benefitted significantly from comments to earlier versions from a number of colleagues and friends, including Dag H. Claes, Helge Hveem, Jon Hovi, Martin List, Giandomenico Majone, Detlef Sprinz, Olav Schram Stokke, Albert Weale, and I. W. Zartman.

## REFERENCES

- Allison, Graham T. (1971). *Essence of Decision. Explaining the Cuban Missile Crisis*. Boston: Little, Brown & Co.
- Bacharach, Samuel B. & Edward J. Lawler (1984). *Bargaining: Power, Tactics, and Outcomes*. San Francisco: Jossey-Bass.
- Benedick, Richard E. *Ozone Diplomacy. New Directions in Safeguarding the Planet*. Cambridge, MA: Harvard University Press.
- Coleman, James (1973). *The Mathematics of Collective Action*. London: Heineman.
- Cox, Robert W. (1973). "The Executive Head: An Essay on Leadership in International Organization. Pp. 155-180 in Leland M. Goodrich & David A. Kay (eds) *International Organization: Politics & Process*. Madison: University of Wisconsin Press.
- Burns, James MacGregor (1978): *Leadership*. New York: Harper & Row.
- Fisher, Roger & William Ury (1981). *Getting to Yes*. Boston: Houghton Mifflin.
- French, Hilary F. (1992): "After the Earth Summit: The Future of Environmental Governance". *Worldwatch Paper 107*. Washington D.C: Worldwatch Institute.
- Gibb, Cecil A. (1969). "Leadership". In G. Lindzey & E. Aronson (eds), *The Handbook of Social Psychology*, Vol IV. Reading, MA: Addison-Wesley.
- Gilpin, Robert (1987). *The Political Economy of International Relations*. Princeton, N.J.: Princeton University Press.
- 
- Grieco, Joseph M. (1988). "Anarchy and the limits of cooperation: a realist critique of the newest liberal institutionalism". *International Organization*, vol. 42, pp. 485-507.
- Haas, Peter (1990). *Saving the Mediterranean*. New York: Columbia University Press.
- Habeeb, William M. (1988). *Power and Tactics in International Negotiation*. Baltimore: The Johns Hopkins University Press.
- Hermann, Charles F. (1972): *International Crises: Insights from Behavioral Research*. New York: The Free Press.
- Hoel, Alf Håkon (1987). "Make Him an Offer He Cannot Refuse: American Trade Sanctions and Norwegian Fisheries Policy". *International Challenges*, vol. 7, no. 1.
- Hovi, Jon (1988). "Hvilke typer av prosjekter kan realiseres gjennom internasjonalt samarbeid?" *Internasjonal Politikk*, 1988/6, pp. 109-120.
- Iklé, Fred C. (1964). *How Nations Negotiate*. New York: Harper & Row.
- Jervis, Robert (1970). *The Logic of Images in International Relations*. Princeton, N.J.: Princeton University Press.
- Kahneman, Daniel, J. L. Knetsch & R. H. Thaler (1986). "Fairness and the Assumptions of Economics". *Journal of Business*, vol. 59, pp. S285-S300.

- Kalai, Ehud & Smorodinsky, Meir (1975). "Other Solutions to Nash's Bargaining Problem". *Econometrica*, vol. 43, pp. 513-518.
- Kindleberger, Charles P. (1981). "Dominance and Leadership in the International Economy". *International Studies Quarterly*, vol. 25, pp. 242-254.
- Lane, Robert E. (1986). "Market Justice, Political Justice." *American Political Science Review*, vol. 80, pp. 383-402.
- Lax, David A. & Sebenius, James K. (1991). "Thinking Coalitionally: Party Arithmetic, Process Opportunism, and Strategic Sequencing". Chapter 8 in H. Peyton Young (ed), *Negotiation Analysis*. Ann Arbor: The University of Michigan Press.
- Lindberg, Leon N. & Scheingold, Stuart A. (1970). *Europe's Would-Be Polity*. Englewood Cliffs, N.J.: Prentice-Hall.
- Majone, Giandomenico (1989). *Evidence, Argument and Persuasion in the Policy Process*. New Haven: Yale University Press.
- Nash, John F. (1950). "The Bargaining Problem". *Econometrica*, 18:155-162.
- OECD (1975). *Polluter Pays Principle*. Paris: OECD.
- Olson, Mancur (1968). *The Logic of Collective Action*. New York: Schocken Books (first published by Harvard University Press, 1965).
- Pillar, Paul R. (1983). *Negotiating Peace*. Princeton: Princeton University Press.
- Putnam, Robert D. (1988). "Diplomacy and domestic politics: the logic of two-level games". *International Organization*, vol. 42, pp. 427-460.
- 
- Riker, William H. & Peter C. Ordeshook (1973). *An Introduction to Positive Political Theory*. Englewood Cliffs: Prentice-Hall.
- Sand, Peter H. (1990). *Lessons Learned in Global Environmental Governance*. Washington D.C.: World Resources Institute.
- Schelling, Thomas C. (1960). *The Strategy of Conflict*. Cambridge, MA: Harvard University Press.
- Snidal, Duncan (1990). "IGOs, Regimes, and Cooperation. Challenges for International Relations Theory". In M. P. Karns & K. A. Mingst (eds), *The United States and Multilateral Institutions*. Boston: Unwin Hyman.
- Sorrentino, Richard M. & Boutilier, Robert G. (1975): "The Effect of Quantity and Quality of Verbal Interaction on Ratings of Leadership Ability". *Journal of Experimental Social Psychology*, vol. 11, pp. 403-411.
- Thibaut, J.W. & H.K. Kelly (1965). *The Social Psychology of Groups*. New York: John Wiley & Sons.
- Underdal, Arild (1979). "Issues Determine Politics Determine Policies". *Cooperation and Conflict*, vol. 14, pp. 1-9.

Underdal, Arild (1983). "Causes of Negotiation Failure". *European Journal of Political Research*, vol. 11, pp. 183-195.

Underdal, Arild (1987). "What's Left for the MFA? Foreign Policy and the Management of External Relations in Norway". *Cooperation and Conflict*, vol. 22, pp. 169-192.

Underdal, Arild (1991). "International Cooperation and Political Engineering". Pp. 98-120 in Stuart S. Nagel (ed), *Global Policy Studies*. London: Macmillan.

Underdal, Arild (1992). "Designing Politically Feasible Solutions". In Raino Malnes & Arild Underdal (eds), *Rationality and Institutions*. Oslo: Scandinavian University Press.

Underdal, Arild (1992a). "Leadership Theory". Forthcoming chapter of a book edited by I. W. Zartman for IIASA.

Walton, Richard E. & Robert B. McKersie (1965). *A Behavioral Theory of Labor Negotiations*. New York: McGraw-Hill.

Wilson, James Q. (1973). *Political Organizations*. New York: Basic Books.

Winham, Gilbert R. (1977). "Negotiation as a Management Process". *World Politics*, vol. 30, pp. 87-114.

Young, Oran R. (1989). "Bargaining, Entrepreneurship, and International Politics". Paper presented at the 30th annual convention of ISA (London, 28 March - 1 April).

Young, Oran R. (1989a). "The politics of international regime formation: managing natural resources and the environment". *International Organization*, vol. 43, pp. 349-375.

Young, Oran R. (1991). "Political leadership and regime formation: on the development of institutions in international society". *International Organization*, vol. 45, pp. 281-308.