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Developing peacekeeping institutions: an economist's approach

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Introduction

The absence of global or regional peacekeeping and peacekeeping institutions cannot be due to lack of interest. It must, rather, be due to the difficulties involved. In this chapter, I collect various strands of thinking I have done over the past few years to understand what these difficulties might be and what they entail (Brauer 2001; Brauer 2000; Brauer 1999a; Brauer 1999b; Brauer and Fischer 2000; Brauer and Roux 2000; Brauer and Roux 1999). From systems control theory, I discuss characteristics of a comprehensive peace system (based on work with Dietrich Fischer). From the theory of imperfect markets, I discuss reasons why there is no ready market in which to purchase peace and what some of the impediments to the creation of a "market for peace" are. And from the theory of collective action (based on joint work with André Roux), I distil principles by which to design institutions that might bring about peace, or at least which sorts of mistakes to avoid when building peacekeeping and peacekeeping institutions.

The economist's job is to think about ways by which to improve people's economic well-being. Peace and personal security are necessary (albeit not sufficient) conditions for economic well-being and prosperity. We must therefore begin by thinking about the economics of preventing violent conflict and of creating peace. There are desirable alternatives to violent conflict – after all, most of the world is at peace most of the time – but these alternatives need to be deliberately constructed and maintained. This chapter will show why it is so difficult to do so.

Systems control theory

We can learn from the way natural systems protect themselves against adversity and adapt to changing external conditions. Any viable system – whether in nature or human society – needs numerous automatic feedback mechanisms to maintain it in a safe and healthy state. Such feedback mechanisms consist of three main components: (a) specification of a desired goal, (b) ways to measure deviations from the goal, and (c) corrective action to return the sys-

tern to the goal state if it has deviated. An example from nature is the human immune system which constantly detects and eliminates disease-causing germs. If the immune system is weakened, as in AIDS patients, the result is illness and death.

Such a system can fail in six possible ways:

- there may be no agreement on the goal (a matter of conflict resolution)
- even if the goal is clear, deviations may not be detected (a matter of observation and measurement)
- even if deviations are noticed, those who could correct them may have no incentive to do so (a matter of economic incentives, and also of ethics)
- even if those who cause a problem will ultimately suffer from it themselves, they may fail to foresee delayed consequences or lack the incentives to do anything about it (a matter of long-run planning, especially in cases involving future generations)
- even if people have timely and accurate information, they may fail to correct a problem due to prejudices or other sources of apparently irrational behaviour (a matter of psychology and culture)
- even if people are fully aware of a problem and wish to correct it, they may not know how or lack the necessary resources (a matter of resources, science, technology and education).

All of these six sources of problems must be overcome. If even a single link is missing, things can go wrong. A collection of institutions that address all of them can form a peace system with mutually reinforcing components, which can overcome the war system. The existing United Nations agencies (for a listing, see www.un.org) already address many of these six common sources of problems. By way of example, Table 7 lists some ways in which existing global institutions may be strengthened, or complemented by new agencies (Fischer, 1996).

First, to improve decision-making procedures at the global level, the General Assembly could be supplemented with a People's Assembly of directly elected representatives in proportion to each country's population. Second, to provide better information gathering capacity at the global level, so that problems can be detected and addressed before they become crises, greater openness is suggested, including verification of agreements by voluntary citizen organizations. Third, to give decision-makers an incentive to do what is in the public interest, support for democratisation at all levels is advocated, so that those who suffer the consequences of a decision are involved in making it. Also an International Criminal Court should be created to hold individuals accountable for human rights violations. Fourth to promote the resolution of conflicts at an early stage, before they lead to war, it is proposed that the UN take a more active role in mediating conflicts. Fifth, to help overcome preju-

Table 7: Six components of a comprehensive peace system

General Remedy (source of problem)	Some institutions to address the problem
Agreement on goals (conflict)	A People's Assembly
Detecting deviations from goals (lack of feedback)	Citizen Watch Groups
Incentives (distorted feedback)	Democratization An International Criminal Court
Foresight (delayed feedback)	A UN Institute for Mediation
Reducing prejudices (rejected feedback)	A UN Television Network A Global Peace Service
Resources and knowledge (lack of remedies)	A World Treasury Strengthening the UN University

dice and xenophobia, it is recommended that a global radio and television network be created that can expose people to a broad spectrum of information and points of view from around the world. A Global Peace Service can bring young people from different cultural backgrounds together to help each other solve problems and forge friendships for a lifetime. And sixth, to make available greater resources for the solution of global problems, Jan Tinbergen has called for the creation of a World Treasury (Tinbergen and Fischer, 1987). Also, the function of the United Nations University in doing research and disseminating knowledge for possible solutions to problems around the world could be expanded.

Thus, systems theory can tell us what kind of institutions we need to produce peace, namely (a) institutions to agree on goals, (b) institutions to provide feedback by monitoring convergence or deviation from these goals, and (c) corrective institutions.

But desirable and obvious as they are, it is equally apparent that some of the needed institutions are not in place. Why not? Because institutions and its decisions are the outcome of collective action and are therefore predicated on the multiple individual interests that make up the collective. As will be seen, collective action theory provides us with some useful principles for the design of institutions. When the principles are heeded, the outlook for attaining peace

are improved. But why are new kinds of institutions necessary in the first place? Why can peace not simply be purchased in the market place? A market, even a market for peace, one would think, would address the six problem areas identified in Table 7. A seller and a buyer of peace contractually agree to produce and purchase peacekeeping services; deviations from the contract can be detected by the purchaser who has an incentive to note any such deviations and, if necessary, switch to an alternate supplier – which provides the incentive for the first supplier to hold up its end of the contract.

Indeed, there exists a huge market for private security services. In 1995, in the US more than twice as much money was spent on private security services than on public security, and there were three times as many private policemen than there were public policemen. Contrary to public perception, there does in fact exist a reasonably active private market for security and therefore for 'peace'. At a national level, private security firms have provided national security functions for African governments (e.g. Angola, Sierra Leone). Nonetheless, peace and security appears to be in short supply and examining closely exactly what makes private markets work we may discover why prospects for private markets for peace are so poor and why new kinds of institutions might need to be created after all.

The theory of imperfect markets

Economists generally recommend that goods and services be provided via free, private, competitive markets. Free means that there is voluntary exchange rather than coercion. Private means the absence of government intervention. And competitive means lack of monopolization. However, there are some important respects in which the free market can operate less than optimally. Six types of market failure are discussed in this section.

1. Property rights and enforceable contracts

Among the prerequisites for the proper functioning of markets are the existence of property rights and contract enforcement. I cannot offer for sale what is not mine. Therefore, property rights – including the right to own myself, the right to my own person and personal safety – need to be well defined. But property rights, by themselves, are not sufficient. For markets to function properly rights must also be enforced. For example, you and I have the right to enter into (and exit from) a labour contract that says that in exchange for my rendering of labour services to you, you will compensate me by payment of a certain monetary wage. Contract enforcement then means that society somehow has made adequate and credible provisions that prevent you from taking

my work without payment and that prevent me from receiving wages without performing the contracted work.

The principles of property rights and contract enforcement also apply to peace within and among nations. Unless peace treaties are adequately and credibly enforceable, we have no incentive to enter into a contract. But who will be the enforcer? In the absence of an external guarantor of security – which requires that the guarantor's benefits outweigh the attendant costs – contracts need to be self-enforcing. In the private market, it is often possible to design self-enforcing contracts. For example, periodic contract review and renewal tends to induce suppliers to "behave" and perform services as contracted. But in the area of peace this is sometimes difficult or even impossible to arrange.

Suppose now that contracts can in fact be enforced, either externally or by self-enforcement. A deeper question then is who has the right to conclude a peace treaty in the first place? Unless the contracting parties are viewed as legitimate – unless the right to negotiate and to enter into a binding contract has been bestowed on them – peace treaties are likely to be challenged. Some process of social sanctioning – by means of formal democracy or otherwise – is therefore a necessary condition for successful, stable peace treaties to work. Peace is always fragile when it is imposed from outside upon those who ultimately have to live with the decisions others make for them.

2. Competitive break-downs

A second reason why markets still can fail to deliver the largest number of desired goods and services at the lowest possible price is competitive break-downs. Lack of competition either among sellers or among buyers produces market power, i.e., the ability to extract a higher (lower) price for reduced (increased) quantities or qualities of goods and services. Competitive markets work so well because buyers can credibly threaten to buy from another supplier and sellers can credibly threaten to sell to another customer. This is different in the case of war and peace. Usually, to resolve differences, party A can only go to party B, and vice versa. The terms of a peace treaty, if it comes about at all, depend on the relative bargaining position of the parties involved and may hence favour one party over the other, possibly seeding the renewal of conflict in the future when the position of the advantaged party may have weakened or that of the disadvantaged party may have improved. One need only refer to the case of Angola in the mid-1990s. If instead of two players holding fifty percent each of the 'market' there had been five players holding twenty percent each, then it would be much harder for any one of the five to

keep fighting – unless all players form a collusive cartel to jointly exploit the country, has occurred in the DRC since the mid-1990s.

In the case of Angola, efforts had been made to bring in the church as a third actor, and it was thought that it might be able to take a stand between MPLA and UNITA. Similarly, another actor was the world oil market. When the market was depressed, it put pressure on Angola's government and strengthened UNITA but, when the market and oil revenues flourished, pressure was taken off the government. The discussion over "blood diamonds" reflected an attempt to involve world diamond consumers as additional parties. The point is that if one somehow could increase the number of parties with vested interests in the conflict, the chances for achieving peace might be improved.

The above paragraph was written before Jonas Savimbi's death – in February 2002. It is interesting how, without Savimbi, UNITA splintered for lack of an undisputed leader and, in essence, became a series of actors. The number of players increased. Just as the theory would predict, increasing the number of actors, or competitors, improves the prospect for peace.

3. Information failure

Another form of market failure is due to information failure. Markets function well when information is plentiful, accurate, and timely, and when it can be processed. Markets do not function well when information is scarce, inaccurate, too late, or when it cannot be processed. Well-informed markets function under conditions of high certainty or at least good risk-assessment. In contrast, ill-informed markets work under conditions of uncertainty. Unfortunately, the making of peace often operates under the latter conditions. Moreover, it is costly to make information more plentiful, more accurate, more timely and to increase one's ability to process it, a cost that the parties may not be able to bear.

In well-functioning private markets, there is an incentive to create new markets just for information. For example, associated with the financial markets are extensive markets for information about financial markets. The needs of participants in one market creates new markets. In the case of war and peace, sadly, this is not so. There is a need for information about opponents' relative strength in manpower, supplies, equipment, and financing. But the number of people who have an incentive to collect and supply this information is small, as is the number of potential buyers; the market is 'thin'. Moreover, it is a risky market for as soon as peace is reached the market for conflict-related information collapses.

Furthermore, instead of being delighted to provide information so as to reassure potential business partners, in the case of war and peace there are

incentives to keep information hidden and even to create false information. The point here is that if one is serious about the production of peace, one needs to think about information needs.

4. Externalities

An externality refers to a situation in which a buyer and a seller in one market impose costs or bestow benefits on buyers or sellers in other markets. This is a market failure because those who benefit should not do so at someone else's expense, and those who impose costs on others should bear the cost themselves instead of socializing it. For instance, peace between any two parties bestows benefits on their neighbours (e.g. improved trade opportunities) or prevents costs (e.g. reduced refugee streams) even though the neighbours do not pay for the benefits thus received. If they do not pay, conflict and war may continue longer than necessary and the desired product, peace, is under-produced. Of course, paying is associated with ability to pay, and personal and national incomes in developing countries, were most of today's violent conflicts take place, are small. Outsiders (e.g. the EU) often have no incentive to pay either, because they are not neighbours and would not benefit nearly as much from peace.

If peace leads to positive externalities, war imposes negative externalities, i.e. those who fight impose costs on their neighbours without compensating them. For example, the fighting in Rwanda in 1994 caused other countries to have to deal with huge refugee streams. The cost to the DRC, for example, was that the Rwandan situation generated a war in the DRC that essentially continues to this day.

To address the problem of externalities, economists recommend the 'internalisation of the externality'. This means that those who benefit from me should pay me, and that those who cause me harm should compensate me. Unfortunately, this usually requires an external authority, a government, to make you pay. But in the case of war, there is no external government or authority, there is no world police force, there are no permanent peacekeeping troops. At the UN, there is not even a ready peacekeeping budget. Worse, those who wish to fight, know that there is no external authority to force and enforce peace which, therefore, is itself an incentive to start and to continue fighting.

Note that external intervention and peacekeeping services themselves are public goods as most nations free-ride on the peacekeeping services other nations provide. To be sure, voluntary security services by some nations for other nations are sometimes provided but often they are incomplete (Haiti), or are abandoned early (Somalia), or they come very late in the game (the Balkans). Often they do not come at all (Rwanda).

Another point regarding externalities is that war can be viewed as a 'desired' activity (e.g., Keen 2000, 2001; Cooper 2002). In this view, war is not driven by irrational motives but by rational considerations of the benefits received – regardless of the cost imposed on others. The problem is that no overarching authority exists, that there is no jurisdiction and legislation, no mechanism of accountability by which those who benefit from fighting are also made to pay for the harm they cause. If war-makers could be made to pay (to internalise the externalities), one assumes that their involvement in war would become too costly and would cease. One way to make them pay is by bringing them before an international tribunal but, despite some recent successes, this is still inadequate to deter war-making.

5. Incomplete markets

In an incomplete market, the benefits to buyers and sellers are greater than their respective costs and yet the transaction does not take place. An example is the market for loans for small businesses. The paperwork associated with making a \$10,000 loan is just as involved as the paperwork with making a one million dollar loan. Even though the small loan would be profitable, banks earn more on larger loans and therefore are not overly interested in the market for small loans. The market is said to be 'incomplete'.

Incomplete markets go back, in part, to information failures and difficulties in contract enforcement. For example, it is likely that a financial institution already has plenty of reliable information on million-dollar customers whereas it needs to generate information on small-scale borrowers. Thus, not only do small loans bring small rewards but they may be more expensive to process and approve than big loans are. Thus, the economics are stacked against the small-loan market. In the extreme case, the market is not only incomplete but missing altogether.

From a global perspective, peace may be seen as an example of an incomplete market. Peace is worthwhile in economic terms. Prevention of war by negotiation is much cheaper than providing peacekeepers and/or the costs of human and physical damage if armed conflict occurs. But how does one create a complete market for peace? The banking example suggests that potentially large armed conflicts, close to or involving the economic interests of outside countries, will encourage their peacemaking efforts. With regard to financing, it is perhaps worth noting that while all UN organizations need to raise their own funds, some have been more successful than others. UNICEF, for instance, is much better at raising private contributions than, say, UNHCR or UN peacekeeping.

6. Public goods

A sixth form of market failure concerns the public goods nature of peace that I already discussed. If peace is freely available to everyone, why should I pay for it? We need a mechanism by which to exclude free-riders and if exclusion is at least partially possible, the resulting good is called a club good.

With regard to war and peace, NATO may be thought of as a club good. It provides a common defence service which, once provided, is available to all its paying members simultaneously. Unfortunately, the exclusionary feature does not work perfectly; the fence is permeable. Switzerland, for instance, is not a NATO member and pays no membership fee and yet few would doubt that NATO would intervene if Switzerland were to face an attack on its national territory. Switzerland, in effect, receives considerable benefits at zero cost. It is a free-rider.

The point is that one way to think about peace and peacemaking is to think about the costs and benefits of club-making i.e. of alliance formation. There is a great deal of economics literature on alliance formation (e.g. Sandler and Hartley, 1999, on NATO). Some alliances work reasonably well, others do not. Part of the reason is that building alliances is costly and that everyone has an incentive to free-ride on others paying the cost. Thus, ECOWAS is not a particularly successful organization. In contrast, the Asian Regional Forum (ARF) ASEAN's common security arm, has done well in that the number of post-World War II conflicts among its members have been very few. Another, and interesting, example is that of Somalia where as long as there was a presence of national government there were fierce factional fights and ultimately unsuccessful intervention attempts by outsiders. Now the conflict has died down and quasi-independent clans run different sections of the country. These clans can be interpreted as clubs, operating independently of one another and providing benefits primarily to club (clan) members.



Government failure

Finally, we need to emphasize that governments be relied upon to redress market failure. After all, there also is such a thing as government failure. The form of intervention to redress market failures may make society worse off than leaving the original failure in place. For example, a government may be concerned about how to deal with the market for hard drugs (cocaine, heroin). One way is to criminalize, the other is to legalize, but regulate, the market. The type of intervention matters, and the wrong type of intervention can make things worse i.e. result in a form of government failure. In the case of war and peace, for example, it is my belief that NATO made a mistake in Kosovo in February 1999. The form of the intervention, an exclusive air-war, actually per-

mitted Serbia to fully carry out its murderous policies so instead of restricting the slaughter, NATO stimulated it.

Coll active action theory

Let me summarize the salient points made thus far. Systems control theory suggests that apart from an agreement on goals (the desired state), we need a monitoring system to detect compliance or deviation. We also need an incentive system to discourage the latter and encourage the former, recognizing that some feedback may be delayed or rejected. In addition, false signal detection and transmission are needed, as are resources to build and maintain the entire edifice in the first place.

From the section on markets we learn that private markets fail to deliver desired goods and services at the lowest price when various forms of market failure occur. We also noted that government failure may occur and that governmental remedies may be worse than the original problem. With regard to the production of peace, it appears that many of the conditions for market failure are present, and that would seem to explain the limited market for peacemaking and peacekeeping services. While I would urge that we think more about remedying the private market conditions that produce market failure, it does appear that there is a need to think with care about the construction of international – regional or global – peacemaking and peacekeeping institutions. Thus, this section presents some design principles, not design prescriptions, for building institutions for peacemaking and peacekeeping. I draw, in particular, on Axelrod (1984), Ostrom (1990), and Sandler (1997). These design principles, if followed, should explain the successful making and keeping of peace, just as their violation or absence should explain the breakdown of peace or the continuance of war. As we will see, these principles should be viewed as a mutually reinforcing package. Applying selected principles diminish prospects for peace.

1. The principle of changing payoffs

The idea here is to induce players toward cooperative action by minimizing incentives to defect and maximizing incentives to cooperate. A number of recent wars have been unnecessarily prolonged because the incentives to defect from peace negotiations were large. For example, in Angola, UNITA's ability to mine and sell raw diamonds created a huge cash flow. Similarly, the Angolan government's ability to extract and sell petroleum kept it well financed. Both sides were flush with money and had no reason to settle, even as generations of ordinary Angolans suffered. It is unlikely that anybody

could have offered either side more than what they made on the diamond and raw materials trade.

One way to change payoffs would have been to contribute (or deny) superior military intelligence and arms to one side, thus changing the balance of force. This would change the game structure to a conditional sum game in which side A is forced to the negotiation table by an outside force, but if side B does not reciprocate with fair-minded negotiations, the outside force can withdraw and impose the cost of renewed fighting on both parties.

2. The principle of creating vested interests and leadership

If two players are themselves unable to change the relevant payoffs, an external force (a leader) may need to intervene. A leader is an external actor able to organize changes in the payoff structure and/or the rules of the game (say, from simultaneous to sequential moves). But the intervention of a potential leader needs to be rewarded with its own positive payoffs, for why else should a leader intervene? This can be illustrated with the sad case of Rwanda in the mid-1990s where almost nothing was done until after several hundred thousands people had been killed. There was no sufficient vested interest. A contrary example is that of Haiti in the early 1990s. When large refugee streams arrived on Florida's shores, the US government was prompted to intervene because it suddenly had a vested interest in keeping people in Haiti. Similarly, in the Balkan wars of the 1990s, the initial vested interest was to contain the slaughter within the Balkans. It was only when massive refugee streams spilled into the richer, western European nations, and when there was a real danger of the conflicts spilling into other countries, that the EU and NATO began to intervene. Therefore, one way to foster peace is to deliberately engineer or trigger vested interests.

3. The principle of reciprocity and clarity

Research has shown that a game strategy called 'tit-for-tat' can be a highly successful and evolutionarily stable strategy. The tit-for-tat strategy works as follows. Suppose there are two players, A and B. In the first interaction with B, A will cooperate. Thereafter, A will always do what B did in the prior round of play. If B cooperates, so will A in the next round. If B defects, so will A in the next round. One important advantage of this strategy is its unmistakable clarity and automaticity. This builds reputation and consequently credible commitments to cooperate, but also credible threats to defect. There can be no sec-

ond-guessing about what A will do conditional on what B has done. Moreover, the tit-for-tat strategy holds no grudge and forgives a past defection by B as it readily resumes cooperation once B cooperates again.

Even though tit-for-tat is a forgiving strategy, if B misunderstands or mistrusts A, there can be set in motion a series of rounds of mutual defection. Therefore, scholars recommend that A assume a graduated response and show limited provocablity. This means that if B defects, so will A but by something less than full defection. If B continues to defect, then A's defections will gradually move toward full defection also.

4. The principle of engaging in repeated small steps

Breaking a problem of conflict or hostility into smaller parcels, players are forced to interact with one another repeatedly. This increases the frequency of rounds played and lengthens the duration of the overall interaction. If any one small round can be driven to a cooperative outcome, both sides risk losing gains already obtained and risk forfeiting future gains to be had if they fail to continue to cooperate in subsequent rounds. Changing the game into an assurance game, where A commits to cooperate conditional on B's cooperation and vice versa, will assist in bringing about peace. This is the theoretical side of the practice of confidence-building measures (CBMs). Alexrod (1984) refers to this process as 'lengthening the shadow of the future'. The more people can be brought to see the ultimate goal by taking small steps instead of premature giant leaps, the more likely it is that they will succeed. Contrast the lack of progress in the "all-or-nothing" approach to the Israeli-Arab conflict with the formation and gradual expansion of what eventually became the European Union.

5. The principle of value-formation

Formation of common preferences produce voluntary aggregations of like-minded individuals who are more likely to co-operate for mutual benefit. This applies to individuals, groups and states. It accounts for the remarkable proclamations of former enemies who during intense negotiations learn that they personally share values such as leadership, political savvy, and care for their respective citizens, and end up with personal respect, even friendship, for each other.

This principle also explains why like-minded nations tend to cooperate well, disagreements notwithstanding. Similarities in political and economic systems, religious beliefs, language, and cultural heritage tend to forge reliable bonds across nation-states to form a cluster of cooperative behaviour. Large

group size by itself will not necessarily make collective action impossible, and neither will small group size always promote it. Especially in civil war situations, the number of contestants is usually small but disagreement exists over shared values.

6. The principle of democracy

Democracy means that those affected by collective action must have a voice in shaping the decision. This is true of individuals within groups, groups within countries and countries within the world system. This principle, commonly expressed in the form of democratic governance, includes people's right to organize and to address and solve their own problems and search for and find indigenous solutions to what may be unique problems. In the absence of voice, peace may not be stable. Disaffected groups may continue to fight if they believe that their concerns have not been heard. Larger groups may need to grant minimum rights, such as freedom to exercise one's religion, to prevent disaffection and violent conflict. This principle also allows for continuous "self-transformation" of governance institutions as old problems disperse and new problems arise that the affected communities need to address.

7. The principle of subsidiarity

Subsidiarity means that problems be addressed at the minimum necessary level of the affected population and that higher-level, external involvement not be automatic. Many conflicts can best be resolved at the local level without involving a government or outside nation-state or group of nation-states. In case of internal dissension, one would expect that the nation-state would have a vested interest in its own continued coherence and viability as the nation-state. For example, in the conflagration over the introduction of Islamic law in some Nigerian provinces one can well make the argument that Nigeria as a nation-state has the obligation to intervene in the provinces before the conflicts grow out of hand and lead to major civil war. That is, as the religious conflict in the provinces affects a community beyond these provinces, the principle of subsidiarity would counsel that the larger community get involved.

The principles of democracy and subsidiarity virtually guarantee continued, gradual self-transformation of collective action institutions at the relevant decision-making level. For example, if a conflict over grazing rights is resolved by groups A and B, then a future conflict over water rights involving group C can also be resolved because democracy guarantees each group a voice and subsidiarity extends the reach to include group C.

8. The principle of conflict resolution mechanisms

There must be speedy, low-cost access to dispute resolution venues. Peacemaking and peacekeeping rest on agreements but disagreement over the agreements frequently arises. To keep these from escalating, ways must be found and stipulated by which to handle follow-on conflicts. For example, ordinary business relations depend on contracts but disagreement over the precise meaning of certain clauses frequently arise. The parties must therefore have recourse to conflict resolution mechanisms such as mediation, arbitration (binding or non-binding) and a system of courts. The absence of such mechanisms to address grievances leads to weak peacekeeping and increases the likelihood of failure.

9. The principle of information and monitoring

Information reduces uncertainty, can help create shared values, and leads to better forecasts of expected benefits and costs. By the same token, misinformation can create uncertainty, false certainty, or division of values. Indeed, players may have a vested interest in creating misinformation. The modern news and telecommunication industry can be of tremendous assistance to peacemaking and peacekeeping, and maintenance of a free press is of great importance. The advent and spread of the internet permits those with access to collect information about any topic from anywhere in the world, and this is a hopeful sign.

Monitoring refers to the ability to collect, process, and verify information. It is the ability to effectively, efficiently, and accurately monitor the actions of the other player. This ability requires funds, skills, and skill development. On occasion, advanced countries have shared results of their satellite monitoring with other countries. Such government monitoring is excludable. In contrast, commercial satellite and intelligence networks could monitor and publicize troop and equipment movements in places such as Sri Lanka. This would encourage negotiation, given that wars cannot be won when perfect information about the other sides' strength and movements is readily available. Existing peace research institutes form a valuable information function but one that could be expanded and be made much more useful. For example, John Pike, of the Federation of American Scientists, recently used commercial below 1-meter resolution satellite pictures to challenge US presumptions about North Korean missile abilities (see also *The Economist*, 6 May 2000, p. 71-73). The objection that this would help entrench repressive governments or help guerrilla movements overthrow legitimate governments does not hold when this principle is combined with other principles such as creating vested interests, authentic authority, and accountability.

Monitoring and monitors must be acceptable to the affected population. One way to assure this is to permit conflicting parties to select jointly approved monitors (rather like defence and prosecution agreeing jointly on a set of jurors in the US justice system).

10. The principle of accountability

Information has the decided advantage of naming individuals responsible for war actions. Nowadays it is virtually impossible for leaders to remain anonymous in making war. With that comes accountability before the court of world opinion. But mere knowledge of who did what is not sufficient. Accountability implies enforcement. An International Criminal Court is better than the uncertainty involved in whether or not the UN *might* create a special tribunal as new violent conflicts erupt. A Court involves the principles of information, reciprocity, and clarity: any future war-maker knows ahead of time that he will be called to personally account for his actions.

Accountability has another side to it. One way to frustrate peace negotiations and to prolong war is to send junior officials or constantly changing representatives who cannot make or are not authorized to make credible, binding commitments. There must be insistence on continuity in representation precisely so that a small set of persons can be held accountable even for their actions in negotiations.

11. The principle of self-policing enforcement

There are two types of enforcement, external policing and self-policing. External policing is costly and suffers from delays. For example, UN peacekeeping forces are financed on a mission-by-mission basis and are often too late and too feeble to effectively intervene in conflicts as one UN member waits on another member to commit troops or funds to the mission at hand. For these reasons, a self-policing enforcement is preferable. Self-policing is closely linked to monitoring. If monitoring shows that player B defects, a self-policing agreement will induce player A to also defect and thereby withhold future gains from B. In this regard, it is generally more efficient and effective to supply parties with the ability to monitor each other than to rely on external monitoring. Exceptions occur when economies-of-scale make it worthwhile to out-source at least part of the monitoring function.

12. The principle of nesting

Economies-of-scale, of learning, and of scope may favour the nesting of institutions. The current UN system serves as an example of economies-of-scope as a large variety of specialized functions are loosely organized under the auspices of a joint umbrella organization. Peacemaking negotiations are unlikely to show economies of scale each case is different – but peacekeeping likely would (common equipment, basing, lift capacity, emergency supply depots, etc., all are fixed costs). This suggests the development of a standing peace-keeping force utilizing, for example, private military companies that already protect humanitarian aid workers.

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