BUILDING INSTITUTIONS FOR PEACEMAKING AND PEACEKEEPING

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Summary

This entry examines the design of institutions for peacemaking and peacekeeping from the point of view of systems theory and collective action theory. The former tells us what kinds of institutions are needed; the latter informs us about the how-to principles by which to design them or rather which errors to avoid in their design.

1. Introduction

Institutions emerged and evolved to solve problems posed to individuals. That institutions evolved means that no one individual deliberately set out to plan and design them. They are endogenous, organic outcomes of evolutionary processes. But in recent human history, institutions are increasingly and more deliberately designed to address pressing local,

regional, and global problems that perhaps cannot wait for organic solutions to evolve. One of these problems is the ever more far-reaching, destructive, and long-lasting power of the contemporary methods and arsenal of warfare and the concurrent need to keep the peace among and within nation-states.

Recent advances in systems control theory have been applied successfully to many technical problems, but have rarely been tried out on social problems. Of course, societies are far more complex than any technical system, but given the seriousness of problems we face, any method that may shed some light on possible solutions should be examined.

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 a system consists of three main components: (a) specification of a desired goal, (b) ways to measure deviations from the goal, and (c) corrective action to bring the system closer to the goal state if it has deviated. An example from nature is the human immune system, which constantly detects and eliminates disease germs. If the immune system is weakened, as in AIDS patients, the result is illness and death. An example of a regulatory feedback system in human society is the legal system, in which laws define non-acceptable behavior, courts determine whether laws have been violated, and the police and penal system enforce the laws. An example from a household appliance is a home heating and cooling system. On a thermostat, the user sets the desired temperature, the thermostat then continuously measures the actual temperature and compares it to the desired temperature, and if a sufficient degree of deviation is detected starts the heating or cooling apparatus to bring the home back to the desired state.

Such a system can fail in six possible ways. First, there may be no agreement on the goal (a matter of conflict resolution); second, even if the goal is clear, deviations may not be detected (a matter of observation and measurement); third, even if deviations are noticed, those who could correct them may have no incentive to do so (a matter of economic incentives, and also ethics); fourth, 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 far-off future generations); fifth, even if people have timely and accurate information, they may fail to correct a problem due to prejudices or other sources of apparently irrational behavior (a matter of psychology and culture); and sixth, 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).

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 those goals, and (c) corrective institutions. Collective action theory then provides some principles to tell us how to construct the needed institutions. When these principles are heeded, the outlook for attaining the overall objective--a functioning cycle of goal statement, feedback loop, and correction--are improved. Conversely, when these principles are not embodied, prospects for peacemaking and peacekeeping diminish accordingly.

2. Peace as a Collective Action Problem

Collective action arises when the efforts of two or more individuals are needed to accomplish an outcome. A collective action *problem* arises when a desirable action is not undertaken by those who might benefit from that action. The famous Prisoners' Dilemma allegory illustrates why mutually beneficial collective action may not be undertaken. Although the prisoners' dilemma metaphor is often seen as the archetype of collective action, the two are not equivalent. Whereas the prisoners' dilemma is a collective action problem, not every collective action problem is a prisoners' dilemma. Nonetheless, it still forms the basic paradigm from which to explore and expand one's knowledge base. The prisoners' dilemma is this. Two prisoners are held in isolation from one another. They are accused of a misdeed which each can confess or deny. If both adopt the strategy of denial, they can be convicted only on a minor charge and receive a two year sentence each. But if one confesses and implicates the other, the confessor gets one year for helping to convict the other whereas the one who continues to deny gets ten years. If both confess, both get five years for showing remorse and confession. Thus, looking at Figure 1 (a) below, the following pay-offs emerge for each prisoner (where A and B stand for prisoner A and B).

	B denies	B confesses		B denies	B confesses
A denies	A: 2 years B: 2 years	A: 10 years B: 1 year	A denies	A: 1 year B: 1 year	A: 10 years B: 2 years
A confesses	A: 1 year B: 10 years	A: 5 years B: 5 years	A confesses	A: 2 years B: 10 years	A: 5 years B: 5 years

(a)   (b)

Figure 1: The pay-offs for each prisoner

In Figure 1 (a), block out the bottom row (i.e., assume that A is going to deny). Then B is better off confessing (1 year is better than 2 years). Now block out the top row and assume that A confesses. Again, B is better off confessing (5 years is better than 10 years). Similarly, block out the second column, assuming that B denies. In this case it would be better for A to confess (1 year is better than 2). Finally, block out the first column, assuming that B confesses. And again, A will confess (5 years is better than 10). Both prisoners possess a dominant strategy. The dominant strategy is to confess, regardless of the strategy the other might choose. Therefore, both will confess and get 5 years each which, for the collective of two prisoners, is an outcome worse than if both had denied the misdeed.

	B cooperates (keeps peace)	B defects (fights war)
A cooperates (keeps peace)	A: 5 B: 5	A: 0 B: 10
A defects (fights war)	A: 10 B: 0	A: 1 B: 1

Figure 2: Prisoner's Dilemma

Countries or groups within a nation-state that are locked in interminable conflict can be represented as prisoners' dilemma game players, as in Figure 2 where the numbers represent some pay-off rank

Thus, even though both players may agree that it is preferable to keep the peace (cooperate), the pay-off matrix may be structured to produce war (mutual defection). Monitoring and correction thus become important, as systems theory suggests. But before correction mechanisms can be designed, it is necessary to recognize that the outcome of mutual defection in the prisoners' dilemma game is the result of a highly specific set of *institutional circumstances,* and the answer to why countries, or groups within countries, keep fighting lies in uncovering the specifics of these circumstances, and only then in devising appropriate intervention mechanisms that might change the game structure to favor the alternative outcome of mutual and stable peace. For example, the problem our prisoners have is that they cannot change these circumstances. For our prisoners the constraints include, but are not limited to, the following: (a) the prisoners cannot communicate with one another and therefore cannot threaten each other with post-prison punishment should one confess to the detriment of the other; (b) the prisoners play this game only once whereas in many real-life situations players face each other repeatedly so that one player's cooperation tomorrow may depend on the other's cooperation today, and each therefore has an incentive to cooperate even today (the "shadow of the future"); and (c) if the pay-offs were slightly different, different strategies would become dominant. In Figure 1(b), for instance, B should deny if A denies and confess if A confesses. Similarly, A should deny if B denies and confess if B confesses. If both prisoners are required to simultaneously reveal their strategy (players make *simultaneous moves*), Figure 1 (b) will have no unique equilibrium outcome. But if the prisoners may make *sequential moves* where B chooses after A has chosen, or A chooses after B, then a superior collective action outcome will result: both deny. To see this, assume that A moves first. A can assure B the minimum sentence of one year by denying. By confessing, B can undermine this outcome only at the expense of getting two years instead of one. Thus, the sequence of moves is an *institutional feature*, as are the possibilities of loyalty and retribution. If B is loyal to A, surely B will deny once A has denied. But perhaps B holds a grudge against A, and delights in the opportunity to get A ten years at the expense of getting two years him/herself (when A first denies and then B confesses). In this case, A would have been better off confessing in the first place. Both then get 5 years. To avoid this outcome, *honor among thieves* (*honor among rogue states*) may eventually pay off.

The example and elaboration attest that the actual strategies chosen depend on a host of circumstantial institutional features. It is the analyst's task to identify and precisely specify this complex host of variables. In the past, analysts have taken a positivistic approach by observing an outcome and reasoning backward as to which underlying institutional structure could have brought about a specific observed outcome. This approach reconstructs or "reverse engineers" an institutional structure or set of possible institutional structures capable of generating the observed outcome. A contrary, constructionist, approach would attempt to specify and create an institutional structure such that a desired outcome, such as peace, results "naturally" as in the players' own best interest.

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Biographical Sketches

Jurgen Brauer is professor of economics at Augusta State University's College of Business Administration (Georgia, USA). He is vice-chair of the board of directors of Economists Allied for Arms Reduction, a US-based group of economists, and serves on the editorial boards of the peer-reviewed journals Defence and Peace Economics (UK) and Nacao e Defesa (Portugal). He is widely published on the economics of military affairs, arms production, arms trade, disarmament, conflict, and peace. He has published several edited books, most recently with Prof. J. Paul Dunne ("Arming the South," Palgrave, 2002 and "Arms Trade and Economic Development," Routledge, 2004). Two monographs - on the environmental effects of war and on the economics of military history - are forthcoming.

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