Arms Control and Behavioral Science

Social and psychological aspects of community
organization are identified as crucial research areas.

Ward H. Goodenough

An intelligent approach to the problem of world peace requires knowing the answers to two crucial questions: What makes people willing (or unwilling) to comply with rules, and what makes them willing to come together and remain together in communities? At best, behavioral scientists have only partial answers to these questions, or rather hypotheses regarding some of the relevant factors. In what follows I discuss some of the issues in these two closely related problem areas, starting with the problem of compliance with rules.

Compliance with Rules

Every functioning community known to anthropologists has rules of conduct whose observance is recognized by its members as a condition of their acceptance as members in good standing. In every community, moreover, some rules are objects of attention and concern, or even dispute, while others are so taken for granted that people have not bothered to codify them. Indeed, in areas of conduct where there is consensus as to what the rules are, readiness to honor them, and opportunity to do so without social, moral, or emotional conflict, there is no more need for a community explicitly to codify its rules than for it to codify the grammar of its language. People learn such rules as they do their grammar, by having their specific mistakes corrected and the mistakes of others pointed out to them ("We don't do

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things that way," we say), without the rules themselves ever being given more than a crude, rule-of-thumb formulation. Given an organized system of rules, moreover, the integrating and unifying principles of the system form a community's basic public values, and these serve to make a number of specific actions almost unthinkable. Cannibalism is not a problem in the United States, for example, nor is homosexuality or rape in the Pacific atoll of Truk (1).

Human attention, understandably, concentrates on rules that are not readily complied with, or whose occasional breaches raise widespread anxiety. Therefore, we tend not to notice that the vast majority of people voluntarily comply with most of their community's rules most of the time. If they did not, their community would soon dissolve. It is clear that there are critical ratios of some sort relating the proportion of rules that most of the people comply with voluntarily to the proportion of people who voluntarily comply with most of the rules. As long as these proportions remain within the critical limits, a peaceful community can be maintained. Otherwise, it cannot be.

For any rule there are several obvious and important conditions of voluntary compliance. The rule must be workable within the limitations of human nature and of people's resources and capacities. It must be compatible with other rules, so that honoring it does not interfere with honoring the others. It must be consistent with, and must give expression to, the values of those who would honor it. It must be in keeping with people's self-ideals, and not work to cause them indignity. Most important of all, people must

have some commitment to membership in the community governed by the rule.

In every community these conditions for voluntary compliance are adequately met for some rules and some members and insufficiently met for others. The rules for which the conditions are insufficiently met are the ones on which public attention tends to focus. These are likely to be explicitly formulated as commandments and to be accompanied by specific sanctions to coerce the unwilling into compliance.

Homogeneous and Heterogeneous Societies

In a small, homogeneous, and socially isolated community that is free to make its own rules and is not undergoing rapid change in its physical or social environment, the conditions for voluntary compliance obtain for a high proportion of the rules and members. In such a community people are likely to have sufficiently similar self-ideals and values to permit the development of rules that are fairly compatible with these ideals and values, from everyone's point of view. The relative stability of local conditions allows evolution of the rules into a form in which they are workable, and sufficiently consistent, one with another, to form a coherent and orderly system. As long as commitment to membership in the local group remains high (and it is likely to remain so if there appears to be no alternative), enforcement is not a serious problem requiring formal institutional solution.

The larger the society, the less isolated it is socially, the greater the number of its subgroups, and the more pluralistic the cultural backgrounds of its members, the greater the proportion of its rules for which the conditions of voluntary compliance do not universally obtain. The conditions are even less likely to obtain when members of one subgroup within the society make the rules for all. When legislators all come from one of several castes, classes, or ethnic groups, for example, their values are not likely to be the same as the values of the other groups. The images they have of the other groups and their ideals for them are not likely to coincide with these groups' self-images and self-ideals. A community of nations is a community of already complex societies, to which a higher level of complexity is added. Inevitably, such a com-

munity must have the greatest difficulty in keeping voluntary compliance with its rules within the bounds required to maintain a community.

As problems of compliance proliferate in larger and more heterogeneous societies, the rules become increasingly an object of public attention. There is increasing concern with enforcement, policing, and the development of jural institutions. As it becomes necessary to make more of the rules explicit, however, there is greater likelihood that their consistency will break down. As soon as a rule is given explicit formulation, its codification makes it easier to think about changing it. It becomes the target of interest groups, which can now more readily perceive how modifications can work to their own immediate advantage. And formal legislative procedures, once instituted to solve other problems, become something that can be exploited to attain a high degree of special privilege. Finally, the greater the rate of change in a community's circumstances, the greater the practical difficulties its members experience in complying with its rules. Change and social complexity together promote concern with rules, thereby fostering the development of institutions for formulating and amending them and for enforcing compliance with them, precisely because they erode the conditions for voluntary compliance.

On the other hand, it is only because appropriate institutions have been developed that it has been possible to maintain the large and complex national communities of modern times. Crucial to their maintenance are the institutional arrangements that serve to keep people committed to membership in the community in spite of the inequities they see in their community and the frustrations and privations they must endure as members of it. What these arrangements are and how they work is something we know very little about. Yet it is in terms of our uninformed assumptions about them that we project our image of a world community subject to the rule of law.

Our image of this world community tends to be one associated with the concerns that promote jural institutions and police forces, with the concerns that arise from the problem of non-compliance. We see men as lawbreakers at heart, curbed only by the presence of some superior physical force, fear of which keeps them in line. We see a

need for a world community in which peace-loving people are in control of a supranational police agency with such a monopoly of power that it can successfully coerce individual nations into compliance with international law. In all our negotiations about reduction in arms or elimination of nuclear testing our concern has been with enforcement and methods of policing.

I can see little about rules for controlling the manufacture and use of arms that makes compliance very difficult or impossible. People have no difficulty in complying with such rules in many national states. Nor can I see how such rules are likely seriously to interfere with the observance of other rules. It is only because arms control is inconsistent with national self-ideals —about sovereignty, for example—or because there is widespread lack of commitment to the idea of belonging to a world community that there may be an enforcement problem. This lack of commitment seems to be a crucial factor. Our own concern with enforcement betrays our mistrust of the commitment of others. This mistrust, moreover, is in no small part a projection on others of our own reluctance to belong to such a community. I notice, for example, that most of those who opposed ratification of the recent agreement to ban nuclear testing on the grounds that Russia cannot be trusted are the same people who most consistently indicate opposition to our membership in the United Nations or any other international community. When there is widespread commitment to the idea of forming a world community for the purpose of regulating arms, the problem of policing it will seem much less of an obstacle to its formation than it does now.

I do not mean that an international community can be maintained without policing. Policing is clearly indispensable in all complex communities. But there is a limit to what it can accomplish. It can work only as long as the proportions of rules voluntarily complied with and the proportions of people voluntarily complying with them remain within critical bounds. When these boundaries are overstepped— when for any reason a large number of people decide to secede from the community, for example—the sanction system breaks down and the rule of law gives way to armed conflict, with the police one of the contending armies. The Civil War in this country reminds

us that there are limits beyond which our own national organization is incapable of functioning. That these limits happen to have been exceeded only once in our nation's short history should not blind us to their existence.

The reality we must face is that jural institutional machinery can, of itself, go only a little way toward making men peaceful. It is important, but its importance is secondary. The maintenance of human communities rests primarily on something else.

Communities

The myth of mankind held in check only by the threat of physical force is overwhelmingly controverted by the most obvious facts. Everywhere and of their own volition men form communities. And they do not need the threat of some outside common enemy, as is often alleged, to bring them together. The North Greenland Eskimo, upon discovery, were a single community that did not know of the existence of any people other than themselves (2). People join communities because they cannot get along without each other. Their emotional and other psychic needs, as well as their physical ones, make community living a human imperative (3). If a community is to function, it must have rules; and everywhere people create rules in accordance with their common interests as a set of conventions by which to make their dealings mutually predictable, just as a grammar is a set of conventions by which conversation is rendered intelligible.

As long as people feel that the road to their self-fulfillment requires membership in a particular community or group, they will want to belong to that community and will remain committed to membership in it in spite of the frustrations this imposes. They will do the very best they can to observe its rules so as not to jeopardize their membership (4). The first thing anybody does on being admitted to a community to which he wants to belong, such as a social club, is to inform himself of the rules so that he can honor them and make himself acceptable to others. He watches others closely to see how things are done, and he carefully copies them. Once a person feels that he has nothing to gain from membership in a community, observance of its rules ceases to be a matter of posi-

tive concern to him. He breaks them whenever he sees a personal advantage in doing so. If he has a strong desire to dissociate himself from the group, he usually declares his apostasy by deliberately and publicly transgressing the rules that are peculiar to it, thereby setting himself apart (5). It is no accident that our most serious delinquency problems in the United States center in those portions of the population where people can see little or no hope of self-realization through playing the game according to our society's rules.

Unfortunately, no system of rules has ever been devised that does not lead some individuals to want to dissociate themselves from these rules and from the community governed by them. In a small community only a few stray individuals are affected in this way at any one time. In complex communities, entire subdivisions may be affected at one time. Since World War II we have witnessed the successful dissociation of numerous populations from membership in political communities dominated by their colonial masters. The British, French, and other empires could not be maintained because they were created and operated in ways that made vast numbers of their subjects feel that they could not realize their self-ideals within these empires and that their own salvation lay in independence from them. Lest we think these events were a product only of colonial situations, we must remember that the Communist nations are also actively and bitterly dissociating themselves from one another. And we must observe that our own relations with the Latin-American countries have created a climate in which large segments of their populations have highly ambivalent feelings about their associations with us.

It is evident that, if the world is ever to achieve a community of nations, we must become much more sophisticated than we are now about the social and psychological processes that affect people's willingness to be associated in the same community. There is a growing sense of mutual dependence among the nations of the world, and the same forces that motivate people to join in smaller communities are now motivating more and more people to join in a world community. But the forces that keep people from joining together in communities, and that erode existing communities, are also at work, and they will con-

tinue to operate even after some happy concatenation of events produces a world community. The forces that at present prevent the United States and Communist China from associating in any way are presumably not unlike those that are now destroying Communist China's past association in a community with the Soviet Union. To achieve and maintain a community of nations in which arms control is possible we must know what these forces are and how they work. They will always be with us. The problem is to learn how to deal with them wisely.

Collective Change

Outstanding among the forces that tend to divide complex communities are those that mobilize people to social and cultural reform and revolutionary change. Research suggests that the social psychology of the collective-change process is intimately linked with the social psychology of individual identity change (5–7). The process involves strong ambivalence toward others, shifting positive and negative identifications, and actions and stances that are likely to be highly disruptive of existing social relationships and hence very annoying to others.

We have a growing legacy of popular wisdom that enables us to be patient with our individual fellows as they undergo such changes along socially approved lines in the course of maturation. But we have little wisdom enabling us to be patient when people are seeking to make collective identity changes on a large scale. These changes, to be sure, are not always ones that other segments of the population are willing to condone. But even when others approve the change in principle, the historical record shows, they see the social manifestations of the process as disruptive of social order (5). It was a rare piece of official wisdom that could see the proposed civil rights march on Washington, with its threats of sit-ins in Congress and other provocative behavior, as one that could be welcomed within the hallowed tradition of peaceful assembly and petition. Those responsible for good order are much more inclined to take immediate repressive action, instead of patiently tolerating collective bumptiousness and disruptive behavior as a necessary part of a natural process. Sometimes, repressive action must

appear necessary even when its consequences are clearly understood. But usually, hindsight repeatedly informs us, its consequences are far more destructive of the community's peace than the original bumptious behavior is likely ever to be. Repressive opposition to what people have come to see as necessary for their own "salvation" leads all too readily to the implacable enmity that characterizes our ideological and religious feuds and wars—to the antipathies that are most destructive of human communities (5, 6).

Collective identity change is a necessary part of the life of any complex community. The world is full of it today, and many of the bitterest enmities in international relations at the present time—the ones that present the most serious obstacles to the formation of a world community—have arisen from the lines of opposition it has generated. There can be no world community before popular and official wisdom develop to the point where we can handle collective change as wisely as we handle individual change.

But first, we need research to provide the knowledge from which wisdom may someday develop. Anthropologists have encountered a number of movements for collective change in underdeveloped areas and have begun to make them an object of serious study (6, 8). We know that in some such movements the adherents continue to identify with the larger community and that in others they do not. Movements that have been reasonably successful in effecting and consolidating change, such as the Communist movement in Russia, show what appears to be a sequence of shifting identifications corresponding to the changing sense of self as the movement progresses. But we do not know much more.

The importance of these identifications is clearly illustrated by the contrast of the civil rights movement with the Black Muslims. Here are two movements for reform growing out of the same background of profound grievance. One actively identifies with the national community and is committed to staying within it. The object of its followers is the improvement of their status as members. This movement necessarily looks upon whites as fellow men whose social discriminations and race hatred are evidence of human frailty rather than of demonic nature. The other movement actively dissoci-

ates itself from the national community, advocates the creation of its own independent state, looks upon whites as a breed apart, not human in the same way that Negroes and the world's other nonwhite populations are human. Advocacy of nonviolent means to attain its goals does not follow from such an orientation.

As we look about us we find many other examples of the same opposition of orientations within discontented populations. Puerto Ricans, for example, are divided between those who identify with the United States and seek statehood and those who wish complete independence. French Canadians are divided between those who wish to be a part of the Canadian national community and those who desire to destroy it and have an independent Quebec instead.

The big question in all of these cases is why some people identify with the larger community while others do the opposite, and what the factors are that cause shifts from one orientation to the other. If we knew the answer we should know a lot more than we now do about what is required to achieve and maintain a world community in which arms control is possible.

I have been saying, then, that the problem of control and enforcement is a part of a more basic problem: What is it that makes communities? At the heart of this problem are the workings of social-psychological processes that have to do with identity, with people's self-images and self-ideals. As an anthropologist I am not qualified to assess the state of knowledge regarding these processes, but some of the work done by students of small groups and "reference groups" seems relevant (9). I can only say that if the practical problems that stand in the way of arms control are largely artifacts of the working of social-psychological processes of the kind I have suggested, then those committed to the promotion of arms control have reason to be concerned with the scientific study of these problems.

References and Notes

1. For a fuller discussion of rules and voluntary compliance, see W. H. Goodenough, *Cooperation in Change* (Russell Sage Foundation, New York, 1963).
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3. See the converging evidence from the work of R. A. Spitz, "Hospitalism," in *Psychoanalytic Study of the Child*, Anna Freud, Ed. (International Universities Press, New York, 1945), vol. 1, pp. 53–74; J. Bowlby, *Maternal Care and Mental Health* (World Health Organization, Geneva, 1951); H. F. Harlow, *Am. Psychologist* **17**, 1 (1962); ——— and R. R. Zimmerman, *Science* **130**, 421 (1959).
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News and Comment

Ranger: Oversight Subcommittee Asks Why NASA Doesn't Prevail on JPL To "Rigidize" Projectwise

On 4 May a subcommittee of the House space committee finished 4 days of hearings on Project Ranger with testimony from NASA administrator James E. Webb, in which he assured the legislators that NASA and the Jet Propulsion Laboratory (JPL)—contractor for the Ranger unmanned lunar spacecraft program—were reaching a meeting of the minds on issues which have ruffled their relationships.

Inferences of a showdown over renewal of a contract between NASA and JPL, which is managed by the California Institute of Technology, had been read into a Webb press conference in February by many observers (*Science*, 6 March, p. 1014). But the strong support given JPL by Webb during the hearings led some people on Capitol Hill to conclude that Webb, like the grand old Duke of York in the nursery rhyme, had marched his soldiers up the hill then marched them down again.

At the hearings Webb indicated that the press had overaccentuated the negative in his press conference and that the important difficulties between the space agency and JPL not only were soluble but were being solved.

While it will be necessary to await the subcommittee report on the hearings to learn if the NASA and JPL officials' comments satisfied the congressmen, the hearings themselves provided an unusually free public airing of the problems of management of a major federal research and development program.

The hearings were held by the House Science and Astronautics Committee's special subcommittee on NASA oversight, created this year by committee chairman George P. Miller to look into problem areas demarcated by the regular authorizing subcommittees in the course of their work.

To give weight to this oversight subcommittee, which is essentially an investigating group, Miller assigned all his subcommittee chairmen and senior members of both parties to it. With 14 members, it is the space committee's biggest subcommittee.

Chairman of the subcommittee is the Science and Astronautics Committee's ranking Democrat, Olin E. Teague of Texas, who is also chairman of the subcommittee on manned space flight.

In the Ranger hearings Teague stepped aside to turn over acting chairmanship to Congressman Joseph E. Karth (D–Minn.), who is chairman of the subcommittee on space science and applications and deals with Project Ranger in the line of ordinary duty. Teague's action, incidentally, is consonant with the general atmosphere established by Miller in the space committee, where seniority does not bind