

am in agreement with his analysis. It is quite clear that we cannot solve the problem as it is now presented to us. So, in the best scientific tradition, the next step is to transform the structure of the problem into one which we can in fact solve.

Among the several things we can do, one of the potentially most helpful would be to revive and old custom used in past centuries when conflicting groups needed some means of ensuring the fulfillment of a treaty, the exchange of hostages. The concept can be modernized and adapted to our present needs.

The original word was "ostage." The Oxford English Dictionary gives as the first definition of hostage: "Pledge or security given to enemies or allies for the fulfillment of any undertaking by the handing over of one or more persons into their power." The key word here is *given*.

Current American usage does not understand the difference between a hostage and a captive. Captives are *taken*, whereas hostages are *given*. The Americans held in Iran were not given, they were taken: They are captives.

How could the exchange of hostages be useful in the management of the dangers presented to us by the arms race between USSR and USA? To have a basis for discussion, let us assume there is a rough moral symmetry between the two contending organizations. One is not much worse or much better than the other. Significant differences in governmental structure, yes, important differences in humanitarian traditions, yes, but not such as to require hurling nuclear bombs at one another.

The object in reviving the tradition of an exchange of hostages would be to generate new, non-technological instruments that would tend to reduce the plausibility of a surprise attack. I estimate that for a given level of deterrence, an exchange of hostages would cost less than a new weapon system, by something like a ratio of a thousand to one.

What sort of hostage system might achieve our goals? Should the hostages be kept in a dungeon, to be shot in the head if terms of the treaty are not kept? Far too crude; what we need is a little finesse.

A well planned program of hostage exchange should be based on two guiding principles: The first is deterrence, the second is the reduction of hostility. As to deterrence we can assume that anyone contemplating a surprise attack would have significantly reduced enthusiasm if some of his loved ones, friends, and others of importance to him were physically located in the places that would be devastated by such an attack. As a first approxima-

tion, we might require that some family members of the Moscow ruling politburo be living at locations in the US we deemed vulnerable. We would like to be able to select who, how many and where they should be located. To preserve symmetry, we should be willing to send corresponding American hostages to locations they might designate.

As to the second goal, the reduction of hostilities, we would probably want to educate the hostages sent to us. We would want to provide hot dogs, apple pie and all the blue jeans they could possibly wear. To keep the process in motion, perhaps we would want to limit the stay to one or two years. Those who elected to stay should be permitted to do so. By the same token, we would have to be prepared for an educational program by the USSR, to convince the hostages they received that there are also positive aspects to Soviet life.

In summary then, each side would select the hostages to be sent to it, and the educational program which they are to receive. There may be complications I have not thought about. I would like to see a scholarly historical analysis of hostage exchange as an institution. What were the successes, and what were the failures? Why did the custom die out? Are there any similarities between today and the ancient times when it was a useful method?

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7/81

More on refereeing

I am a physicist practicing in industry. I am also an author and referee of papers appearing in AIP (and other) journals.

As an author, I agree with Robert Adair (June, page 15) that withholding the identity (or perhaps more important, the affiliation) of an author has dubious merits. I doubt that it will affect the publication of one's paper, though it may well affect the interval between submission and eventual publication. (When submitting papers from a prestigious New England academic institution my papers have been accepted rather more rapidly than when submitting them from a less well known government laboratory.)

As a referee, despite the assumption by Hugh Carlon (June, page 15), I do not mind (and would indeed prefer) disclosing my identity. In my organization I frequently am asked to review invention disclosures, technical reports and papers submitted for external publication. As a matter of course I make a signed copy of my review available to the authors, and wherever possible I attempt to discuss the paper with them

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letters

prior to doing so.

If there is a solution to the vexatious problem of refereeing, it will not be found in more anonymity but in less. In analogy to the sunshine laws enacted by many communities to open the deliberations of their legislative bodies to the public, I propose that we physicists set the lead in observing wherever possible a "Sunshine Principle," the objective of which would be to promote more openness rather than less.

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7/81

Accidental nuclear war

I agree with almost all the interesting ideas and analyses in Wolfgang Panofsky's article on the arms race (June, page 32). There is one well-known point that is crucial to arms control which I think should be emphasized more strongly: It is in our national interest to assure the Soviets that they have a sufficient number and diversity of nuclear weapons to survive an attack by us. It is in the Soviets' interest to convince us that they are not able to destroy our retaliatory forces in a first strike. If either side concludes that nearly all its retaliatory forces could be destroyed and is therefore pushed into adopting a policy of retaliation before enemy missiles actually land and detonate, the danger of starting a nuclear war by accident will increase greatly.

Though these dangers are well-known, the policies of our leaders seem to be heading us in exactly the wrong direction. It is not in our own interest to develop a level of nuclear superiority that convinces the Soviets they must respond hastily to an apparent attack. As a worst case, if we install missiles in Europe that threaten Soviet ICBMs, the Soviets will be pushed toward removing all or nearly all human safeguards from their decision to launch a "retaliatory" attack. Last year we fortunately had enough time to detect the well-publicized six-minute long "computer errors" that gave us a highly realistic indication we were being attacked. The Soviets will have only four minutes to respond if they are convinced that an attack has been launched from Western Europe.

Another important safeguard that protects us from having a war started by a small group of terrorists or other deranged individuals in this country also will be lost if the Soviets decide they must respond hastily. We are frequently told our nuclear weapons cannot be launched without direct authorization by the President. This safeguard means little or nothing if the