

Clearly, the Americans and Europeans saw a fearful imbalance, the Soviets none at all. How can the differences be accounted for? It is impossible here to do justice to the complexity of that debate, but one or two points from the table may suffice to illustrate the obstacles faced by the proponents of a comprehensive freeze. First, it will be noted that the Soviets counted in the British and French nuclear forces while the Americans did not. Without the British and French forces, there is undoubtedly an imbalance. Inadvertently, therefore, but as in many other instances, the proposal for a comprehensive freeze bumped into a long-standing dispute in which the parties are unlikely to change their position, or to have it changed for them, in order to comply with a comprehensive freeze proposal.

Second, the discrepancy about the number of airplanes and missiles in the two sets of figures illustrates one of the serious weaknesses in arms control counting techniques. The test firing and actual deployment of long range missiles can be ascertained with a very high degree of confidence. Moreover, through the SALT I and SALT II processes in matters concerning strategic weapons, the superpowers have acquired considerable experience in dealing with each other about these numbers, so that a basis of procedural agreement and understanding exists. Such is not the case with theatre nuclear weapons: they are inherently more difficult to count, their operational task may not be obvious (they may in any case be multi-tasked), and they may be dual capable: that is, able to carry both conventional and nuclear weapons. Although there are sophisticated and ingenious proposals for techniques which would overcome these obstacles, the lesson of Table I is that this could not be done without complicated negotiations.

2) Verification

It is commonly assumed that the Soviets have no difficulty with verification of American nuclear force deployments because of the open nature of American society. Although this may not be entirely true, it is the case that verification is essentially a 'western' preoccupation. Verification is generally thought to be a technical question, as indeed it is, but it also has political and perhaps perceptual aspects which are worthy of note.

Even in technical terms, however, where one might suppose that disinterested scientists could agree about the objective evidence, verification of a comprehensive freeze has been a subject of enormous debate. Many technical experts who support the freeze do not suggest that verification could ever be complete, but only that the margin of error can be sufficiently low, and the consequences suffi-

ciently unimportant, that existing verification capabilities are adequate to allow each superpower *independently* to observe compliance with a comprehensive freeze. The critics dispute this claim; not only do they argue that the margin of error is significant, but also that there are certain areas of the freeze in which verification is highly problematic. In general, it is accepted that there is high confidence in the national technical verification of the testing and deployment of ballistic missiles. Until the Reagan Administration declared its position to be otherwise, there was a general acceptance of the verifiability of a comprehensive ban on nuclear weapons testing (CTB). There is somewhat less consensus about the verifiability of a ban on the *production* of delivery vehicles, and less still on the production of nuclear warheads and of weapons grade nuclear materials.

It is also generally agreed that detection of violations is more easily achieved if there is a complete ban on all activity. The contentious nature of verification, however, is considerably more complicated if it is allowed, as some major proponents of the freeze have now done, that some activity must continue for the replacement of worn-out parts, of malfunctioning systems, and of some critical elements in the manufacture of nuclear weapons, especially tritium, which degrade quickly over time. There is the further problem of determining whether dual-capable systems are to be included, for if they are not, then the temptation might be great to improve these systems as compensation for other systems frozen. The inescapable conclusion is that there are sufficient complexities involved in verification to sustain a prolonged negotiation.

Such a negotiation seems more likely if, in addition to the range of problems which are technical in nature, certain other aspects of the verification issue are recognized. First, it is difficult to resist the thought that problems of verification may be used to obscure a pre-determination to develop or deploy a new system. Reference has been made above to the inherent difficulties which were involved with the MX or the Pershing II missile systems.

Second, at least in the American case, there is a perceptual difficulty stemming from the distrust, at both official and public levels, of Soviet leaders and the Soviet system. The greater the belief that the Soviets will cheat and have malign intentions, the more compulsive the search for complete verification. Hence recent charges by Washington about Soviet non-compliance with the ABM Treaty and SALT II accords have reinforced the insistence on foolproof verification arrangements. The conundrum posed by this perceptual progression is well illustrated by the observation of an American verification specialist, Amron Katz, who argued with