

essential to use solid fuel with mobile missiles, since liquid fuel is too bulky and flammable to permit mobility.

General Observations about Tables 1A and 1B

Overall, the tables clearly illustrate one of the central difficulties with which arms control negotiators struggle: for a variety of reasons - different targeting priorities, concepts of nuclear deterrence, technological skills, bureaucratic politics - the superpowers have developed their nuclear arsenals in an asymmetrical pattern. In sum, the United States has emphasised a balance of delivery systems such that the "triad" of land-based, sea-based and air launched weapons remains more or less equally important in its parts. The Soviet Union also has the elements of a triad, but much the greater part of its strategic weapons are land based. It is for this reason that proposed cuts in weapons systems which are applied only to one type fall unequally on the two sides. As a consequence, easy debating points may be won by proposing cuts which are, on the surface, eminently reasonable, but in reality have no chance of acceptance because they adversely affect the relative position of the other side. To avoid this dilemma, reduction proposals which allow each side the freedom to choose their own mix of forces, on the way down to an agreed lower level for total delivery systems or warheads, provide much greater potential for fruitful negotiation.

Some general characteristics of the strategic weapons systems of the superpowers are readily observable. The range of American weapons systems, with the exception of some SLBM systems, is greater, and the readiness of American systems is likely to be greater (remembering that there are other factors involved which are not indicated in the table) because a significant number of Soviet systems use storeable liquid fuel, and therefore take more time to prepare for launch than missiles using solid fuel. Generally speaking, the Soviet systems have significantly larger throw-weights, and larger yield warheads, but this advantage is partially offset by considering EMT. Here the smaller American warheads are more