

---

## Chapter 3: Ambiguous Space Operations

By comparing the lists of “weapon” and “nonweapon” space operations, ambiguities can be identified. This process is the central issue towards which the discussion in the last chapter has been building. The following questions are especially discriminating in identifying ambiguities:

- (a) How could space weapons be camouflaged?
- (b) How could spacecraft originally intended for use in nonweapon roles be misused as weapons?
- (c) To what nonweapon uses could a space weapon be put?
- (d) What characteristics would make a satellite unambiguously a weapon?
- (e) What characteristics would make a satellite unambiguously a nonweapon?

The limited space available does not permit an exhaustive categorization of all possible entries and their cross-references; representative results will be presented here.

### 3.1 Criteria for Discrimination

Three criteria for distinguishing between weapon and nonweapon operations will be used in the following discussion:

- critical capabilities;<sup>3</sup>
- supporting technologies; and
- observables.

Using these criteria, similarities between entries in the two lists can be identified. If a nonweapon and a weapon share even one criterion, they will be judged ambiguous.

Among the *supporting technologies* judged to be critical are these: antimatter generation/storage, mass-drivers, nuclear reactors pulse-nuclear rockets, anti-matter rockets, large-aperture mirrors, ion rockets, large-aperture high-power lasers, or particle accelerators. For the most part, *observables* include visible<sup>4</sup> characteristics: large power source, large fuel/oxidizer tanks, long, slender structure, large-aperture optics, radioactive emissions, or large constellations.