

(Mr. Clarke, Sri Lanka)

Does this mean that the Soviet Union is twice as aggressive as the United States? Not at all, because the Soviet Union's reconnaissance satellites are planned to operate for only a few weeks whereas the much bigger American satellites remain in orbit for many months. So the quantity of American reconnaissance information is probably much greater than that of the Soviet Union, a point to which we will return later.

However, photographic or television reconnaissance is limited by cloud conditions; only radar can give all-weather coverage. And only the USSR has used radar satellites, powered by nuclear reactors to reconnoitre the movements of ships at sea, as was revealed when Kosmos 954 crashed in Canada in 1978.

Another area of confusion and controversy is that of Landsats or earth resources satellites, which give superb views of our planet, of enormous value to farmers, industrialists, city planners, fishermen — in fact, anyone concerned with the use and abuse of Mother Earth. The United States has made its Landsat photographs, which have a ground resolution of roughly 80 metres, available to all nations. Not surprisingly, there has been some concern about the military information that these photographs inevitably contain. That concern will be increased now that Landsat D has started operations with a resolution of 30 metres; I was stunned by the beauty and definition of the first photographs when they were shown to us at UNISPACE a few weeks ago. The French SPOT satellite will have even better resolution (10 - 20 metres) and this is rapidly approaching the area of military importance, although it is nowhere near (perhaps by a factor of one hundred) the definition of the best reconnaissance satellites under favourable conditions.

There is a continuous spectrum between the abilities of the earth resources satellites and the reconnaissance satellites, and it is impossible to say that one is military and the other is not. What matters is, again, intention.

One may sum up the situation by saying that although these satellites may be annoying to some nations, they are not aggressive: and that is the essential factor.

More confusion has now been created by the American space shuttle, which has been heavily criticized in the Soviet Union. It is perfectly true that many of the shuttle's missions will be military — yet it is as potentially neutral as any other vehicle.

The one new factor the shuttle does introduce is that, for the first time, it gives a space-faring power the ability to examine, and perhaps to retrieve, satellites belonging to somebody else, thus opening up prospects of "space piracy" — as the Soviet Union has put it. However, one cannot help thinking that fears on this score have been greatly exaggerated. If you do not want anyone to capture your satellite, it is absurdly simple to boobytrap it and thus to destroy, with very little trouble, an extremely expensive rival space system.

From past experience, I would venture a prediction in this area. When only the United States possessed reconnaissance satellites, there was a great outcry in the Soviet Union about these "illegal spy devices". When the Soviet Union also possessed them, this cry was suddenly stiller. In the same way, when the Soviet shuttle is launched, perhaps we will hear no more talk of space piracy ...

The essential point is that all these systems — communications, meteorological, scientific, reconnaissance, and the shuttle itself — though they represent some degree of militarization of space, are still, for the moment, defensive or even benign. Some countries may be upset by certain applications, but they can all live with them, accepting their benefits as well as their disadvantages. The new factor which has now entered the discussion is that of deliberately destructive space systems, i.e. weapons.