Lunar Biology?

If the launching of a moon-bound satellite is within the imminent reach of present day technology, biologists should join with other scientists in giving some forethought to the implications of this accomplishment for their own science. That little or nothing has been said about this subject so far may be put down on the one hand to the probability that lunar conditions are incompatible with any form of continued life, on the other to the too visionary context of such speculations.

However, if a lunar satellite is a near reality in fact, it is unrealistic not to anticipate it.

There is at least one important issue that requires advance planning if a unique opportunity is not to be confounded or lost. This is whether or not the meteoritic dust which supposedly covers the surface of the moon contains still viable spores. Although the most likely origin of such spores would be terrestrial escapes, e.g. from volcanic catastrophes, the possibility of a small fraction of them remaining viable would be the most direct empirical test of Arrhenius' biospore theory which hitherto has had to remain befogged by pure speculation.

Without forethought, satellites may be sent to crash on the moon without any care to eliminate or minimize the artificial contamination by bacterial spores, etc., that they may carry with them. It will probably be many years longer before we can retrieve samples from the moon's surface, and by then it may no longer be possible to judge whether spores can achieve as well as survive interplanetary transit by natural agencies.

This is only one issue; others may arise. My principal conclusion is that the responsible agencies of the U.S. and other governments should have the advice of an expert committee to deal with questions of extraterrestrial biology, as they already have on innumerable aspects of the physical sciences.

> Joshua Lederberg University of Wisconsin December, 1957