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The Honorable Lyndon B. Johnson  
Senate Office Building  
Washington 25, D.C.

Dear Senator Johnson:

The report of your Committee on Aeronautical and Space Sciences, "Space Research in the Life Sciences" was kindly sent me, and I have been deeply interested in its content and in the conclusions.

The press has been quick to note your criticism of NASA for having organized a division of life sciences. In my own view, the administration may be liable to many criticisms, but this is one of the most constructive steps that NASA has undertaken. I say this both as a research scientist dealing with NASA on space science projects and from my experience as a member of the Space Science Board. This view also is shared by all of my scientific colleagues whom I have consulted. As I have greatly admired your support for science and for the space program in the United States Senate, I am especially anxious that you hear such a comment.

The organization of the Office of Life Sciences in NASA was particularly urgent to mobilize our scientific talent for the problem of exobiology, the nature of life on other planets. This is surely one of the most exciting challenges in our space problem and much more scientific support must be given this area to ensure the success of our intended missions. Without the advice of the new office, NASA could not have the expert knowledge to cope with these tremendous problems.

In fact, before now, some extraordinary nonsense has been promulgated in the name of space biology -- for a specific example, the breeding of "space monkeys." Such inanities have been widely publicized and have antagonized many informed people, especially biologists, to the point where the serious objectives of our national space program have become obscured in their minds. The Office of Life Sciences now gives NASA the means to screen new projects and ensure that only creditable ones are given the dignity of participation in the American program, for the same sober merit that attaches to our splendid accomplishments in space physics. Whether this office or any responsible authority will be able to moderate the publicity attracted by other silly projects in many scattered installations, particularly the military ones, is a problem that does deserve your serious consideration.

Another example of the need for expert knowledge in the NASA organization on problems of biology is in the unlikely field, for a rocket engineer, of disinfection. It has finally been recognized that we

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need to ensure the complete decontamination of any vehicles that we may send to planetary targets to avoid the hazards of spreading earth-life forms elsewhere by inadvertence. Implementing this caution requires a well informed administrative authority.

It is not easy to see why the Department of Defense should wish to be involved in exobiology and indeed, I would strenuously oppose such involvement both in principle and for tactical reasons -- for example, hindrance to international cooperation for projects that have a close military connection.

Many inconsistencies and illogicalities must arise from the executive directive that there is no military mission in space. Since the Department of Defense will have to continue advanced programs in space technology and space science for patent defense needs as well as to avoid ugly surprises, such a directive can only provoke well-intentioned efforts at evasion. I hope that the next administration will give serious consideration to reinstating and clarifying the military interest in space programs -- and, for example, to returning the development of manned space flight to military supervision. It is difficult to find serious justification for a crash program in manned space flight for scientific purposes, but we should not overlook ultimate military applications. Many of my colleagues would deplore the frantic effort which the House Committee has urged NASA to make to send man to the moon. Thus, a continuing expert review of the capabilities and intended uses of man in space flight would be another indispensable purpose of an independent Office of Life Sciences in the Space Agency.

No one could quarrel with the insistence that government agencies must coordinate with one another to prevent waste. But for NASA to function effectively, it must have its own technical competence in biology, and biological problems must be represented in the formation of policy.

Yours sincerely,

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JL/jh

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