

July 6, 1971

Dr. Philip Handler
National Academy of Sciences
2101 Constitution Avenue
Washington, D.C. 20418

Dear Phil,

Thank you for your letter of June 29 concerning a prospect of study of the effects of nuclear war.

This past year I have been teaching in a course on arms control, as part of an ad hoc faculty organized by John Lewis. In thinking about future activities of our group we indeed discussed a research effort precisely along the lines of the proposal in your letter. At that time I expressed serious reservations about the value of such a project; I must say that I believe I was in the minority and some of my colleagues may take it up again notwithstanding. However, my reservations may also pertain with equal validity (and perhaps unpopularity) to the present issue.

My concern is that the projected study would hardly differ from a weapons' effects protocol of the kind that has undoubtedly been sponsored many times by the Department of Defense. A scientific study of weapons' effects may indeed reveal some unexplored possibilities for maximizing the level of destruction that could be predicted from a given payload. This would be expected to motivate further technological development, particularly in the framework of efforts to limit overall weapons' payloads by negotiation and the discounting of an opponents capability to attempt a first strike reduction in retaliatory force. Such studies have a role in our defense strategic planning but I do not think they warrant the auspices of an academy contribution to the cause of peace and disarmament.

There is some merit in the counterargument that our present deterrent is overscaled on account of underestimates of the secondary consequences of even an abridged nuclear attack. If this were more widely understood on both sides it might facilitate a mutual de-escalation of the arms race and enlarge the zone of indifference to the absolute capabilities of either side. However, it would also point the way to countries with marginal nuclear capabilities and generate temptations that would erode the tenuous fabric of non-proliferation. "If just one bomb could be made really that terrible perhaps it is worth owning after all".

over

7/6/71

All in all I fear that the project would backfire in terms of its intended political effect, especially on the young people mentioned in your letter. The students I have talked to are all too well aware of the destructive potentiality of nuclear weapons! Some of them do not know but perhaps do not need to know the physical details. They do indeed harbor contradictory allusions but at a political rather than a weapons-technical level. They believe we are safe from nuclear attack because of our own deterrent. On the other hand they still condemn work on strategic weaponry as a distortion of science which kills people. And these youths are thoroughly compartmentalized.

If you wish to orient a study in this general arena more likely to have the impact you seek, I would suggest a consideration of 1) how to probe and influence the level of destruction that any side would in fact judge to be "unacceptable" and 2) how to accomplish a separation in the student ethos, perhaps necessarily also in the administrative apparatus, in attitudes about technology for strategic defense versus tactical offense. These are not issues for which expertise in the natural sciences is especially relevant, we must agree.

I realize that my misgivings may be too feeble, too articulate, or too tardy to influence the decision to proceed with the study. In that event, surely, if it is to be done it must be done well! I will give some thought to your solicitation for names of people who might assist in the study. It would help me focus my thoughts if you could give me some further indication of when it would begin and the character and duration of the commitment to be expected to be required. Herb York is one of some few names that comes immediately to mind as a candidate to share the study. There is an obvious merit in finding someone who had been privy to the secrets but is now sufficiently disengaged from both government and over-riding organizational responsibilities.

Sincerely yours,

Joshua Lederberg
Professor of Genetics

JL/rr