

## RESPONSIBILITIES OF SCIENTISTS— A CLOSER LOOK

From a reading of today's lay and scientific press, one must conclude that scientists are most important people. And, indeed, the signs of their beneficence are on every hand—rapid travel, instant communication, globe-encircling rockets, moon probes, food surpluses, longer life spans, and all manner of creature comforts which by now are taken for granted. Verily, ours is the age of scientific marvels and we are in the debt of those who have made it possible.

But let's pause a minute. By our uncritical awe aren't we perhaps forcing scientists to take themselves too seriously? And aren't we letting science as a discipline off too easily? If we look beyond conveniences, what have the sciences—the social, the biological, the physical sciences—given us that is of broad significance or of lasting benefit? Really very little, so far.

The social sciences have as yet told us nothing as to the causes of man's deceit, his greed, his lust for power, nor have they suggested any plausible remedies. Human nature may be immutable, but if we understood it better we might find ways by which man could learn to live decently with himself.

The biological sciences have made our lot a more comfortable one but not significantly longer or more productive. Medicine still knows virtually nothing about the cause of man's most disabling ailments—mental disease, atherosclerosis, and cancer—nor has it faced squarely such basic issues as birth control, euthanasia, and the continued breeding of those who are genetically defective.

The physical sciences have engineered the miracles of the space age but have not yet controlled atmospheric pollution. They have given us a source of enormous potential benefit, atomic power, but cannot control radioactive fallout—nor prevent the use of atomic power to destroy us all.

The sciences have produced benefits that are largely superficial or external or potential; they have given

man increasing control over nature but not over himself. They have not enabled him to expand his internal dimensions, to control his passions, to build a world where he can live without starvation, or segregation or slaughter. The scientists have failed to accomplish these things, partly because man himself is not wholly reasonable, partly because they have not applied in the larger sense scientific knowledge to society's needs. They have left this responsibility to the politicians who often do not understand what should be applied, or who do not always find the application expedient.

And so the scientists find their technological offspring being raised by political fathers whose parental abilities are sharply limited by a lack of scientific training. Without such training no man can fully appreciate the implications, present and future, of a rapidly advancing technology. We cannot afford to have decisions on such problems as the health of the nation or atomic control or atmospheric pollution forced by the default of scientists into the hands of laymen. Scientists must take an active role in formulating policies which relate their discoveries to the public welfare—not, as in the past, fight a rear guard action against policies that they have been unwilling to help develop. This active role will be possible only if scientists learn to understand the impact of a rapidly advancing technology on society.

Buchan\* said: "Statesmanship demands two gifts—the conception of wise ends and the perception of adequate means." The scientist has never been at a loss to perceive adequate means; but in our present science-dominated society, he must also take an active role in the conception of wise ends.

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\* Buchan, J. *Montrose*. London: Oxford University Press, 1928, p. 413.