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THE MORAL RESPONSIBILITY OF THE SCIENTIST

To argue that scientists have no moral responsibility for the use or misuse of their discoveries oversimplifies the issue. It ignores the fact that top-level research scientists are not ordinary people. Since their duty is to do no basic harm to the society in which they live, which has trained them and by which their research is funded, they should suppress those scientific discoveries which might be misused, and which ordinary people do not know about.

There are a number of reasons for this. In the first place scientists are, as individuals or as members of a research team, in a position to know what is going on at a given moment in their field, nationally and internationally. They are in a position to know what has been discovered, and in which field crucial discoveries are likely to be made.

Therefore, acting individually, or together with their fellow-workers, scientists possess invaluable information which should be made known to their fellow citizens if it has, or may have, a direct bearing on their well-being.

As privileged citizens, and members of powerful international elite, scientists are also in a position to fight for the suppression of potentially harmful discoveries. To suppress dangerous inventions does not only mean to conceal them. On the contrary, by revealing, or bringing them out into the open, which they have the knowledge and the professional authority to do, scientists can enable informed decisions to be made by their fellow citizens as a body. This is surely preferable to such decisions remaining secret, to being the target of scientific espionage, or to being in the hands of irresponsible political or military rulers in pursuit of dangerous policies.

Furthermore, only the scientists - the experts in their special fields of research - have the knowledge, skill, and insight on which judgements relating to the latent use, or the consequences of use, of new products and processes can be adequately made. A disastrous moral judgement is more likely to be made by uninformed politicians, than by well-informed experts, able to consult with colleagues in other fields at the highest level.

It is not that one is entitled to expect scientists to have a higher brand of morality than their fellow-citizens. But in so far as knowledge constitutes power, scientists are powerful. Therefore their moral decisions, and thereby their duty, must be more carefully considered in all their implications.

As privileged members of society, scientists have an underlying obligation to reveal information about potentially harmful discoveries, to enable their fellow-citizens to anticipate danger and to decide what to do about them. It is easier, surely, to convene an executive committee to decide on the manufacture of a new and potentially lethal gas, than to replace lost lives. After all, dead citizens cannot vote.

In short, scientists do have a direct and special duty to their fellow-men. They cannot avoid this responsibility by maintaining that someone else should do it. If, to take an example, they are powerful enough to convince a government to ban alcohol or drugs, they are powerful enough to influence the proliferation of nuclear weapons.

A scientist is not isolated from society. He or she is also a moral being with a social conscience. Knowing more than ordinary people, scientists should be the first people to expose the misuse of scientific discoveries endangering the lives and surroundings of their fellow-citizens.

When we talk of the moral responsibilities of scientists we mean nothing more than that they have a duty to do no fundamental harm to the society in which they live. Since they share this duty with everyone else - insurance men, teachers, civil servants, manual labourers, farmers - one assumes that they are singled out for special mention first because they are a new phenomenon (97 per cent of all the full-time scientists who ever lived are still alive) and secondly because of their disproportionate power to help or harm society. Society's fear of the scientist is not irrational; for society is conservative, backward-looking and intent for

preserving the status quo, while the scientist is radical, forward-looking, and by his or her discoveries likely to change the material environment of society. Since scientists threaten the established order in this way, they are, by our previous definition, immoral. The usual charge leveled at scientists is that they ought to, and do not, suppress those discoveries of which a harmful use might be made.

This naive accusation, however, reveals a basic ignorance about how scientists work. In the first place discoveries are not usually the work of one person, but of a team. Splitting the atom, the example to which any discussion of science and morality inevitably leads, is a case in point.

Another is penicillin, which we owe partly to Fleming and partly to those who took up his work and made production a practical possibility. Secondly, scientific advances are not made in a vacuum. One advance follows the other, and each leap forward opens up new fields for further research. Science is a chain reaction, and it might be disastrous to suppress a discovery, however trivial, which might one day be a vital missing link. Thirdly, discoveries have an uncanny habit of being made almost simultaneously by scientists working independently of each other in different parts of the world, so that one is tempted to believe that each advance becomes due at a particular moment and if not made by one person will be made by another. It is futile to ask a scientist to conceal his discoveries, because they are not his alone; he has worked in concert with others and even if by superhuman effort and diplomacy a whole team of scientists could be persuaded to keep them secret, they would soon be discovered and taken up elsewhere.

In any case who would be bold enough to set himself up as an authority capable of deciding what is harmful and what is helpful to society? Arsenic can be used to poison rats or misused to poison people; atomic power to warm the world or to blow it up. The scientists who made possible the heating and lighting of houses by gas can hardly be blamed for failing to foresee the use Hitler would make of their discovery.

The truth is that it is the ordinary man and woman who use or misuse the discoveries of science. As members of society, scientists have a responsibility to see that they are put to proper use (a special responsibility because they know more about them than other people), but as scientists, their duty is to discover as much as they can about people and the universe. The use that may be made of the discoveries of scientists is not a responsibility that can be shuffled on to them. It rests squarely on the shoulders of society.