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Some Observations on Ethical Problems and Conundra for Scientists

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In our time, when problems of population growth, consumption demands and climate change are matters of daily concern, I want to mention some of the ethical problems that have confronted scientists. The fact that any discovery may turn out to have both wonderful and disastrous consequences has been discussed many times before.
The discovery of nuclear fission brought us both the atomic bomb and nuclear power generation. One may lead to the end of human life on earth and the other may be the only way that we can avoid catastrophic global climate change.
Among the German Nobel laureates who worked on poison gas in WW1 were Fritz Haber, Walther Nernst, Otto Hahn, James Franck and Richard Wilstatter. Americans who worked on poison gas included James B. Conant, later president of Harvard and supervisor of the Manhattan Project.
There is no science that cannot be misused. The fertilizer that helps to feed millions and is made using Haber's Nobel-prize-winning process, is the main ingredient in home-made bombs, along with diesel fuel.
Often totally benign discoveries lead to consequences that society has been unprepared or unwilling to deal with. These include DDT and Penicillin, which led to wonderful reductions in infant and adult mortality, but caused population growth that made demands on food resources that were often unmet.
More mundane problems include decisions that we have to make about attending conferences in countries with serious human-rights abuses or governments whose policies and actions we may find abhorrent. The work of editors of scientific journals involves daily questions of ethics.

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