Merchants of Doubt: Summary

Chapter 1: Tobacco and lung cancer

1953: US research showed smoking could cause cancer. This conclusion was supported by U.S. Surgeon General’s committee of investigation (1962-4). By this time the industry’s own scientists tacitly accepted a link with cancer and were working on ‘safer’ cigarettes. As the danger of smoking became more widely known, the industry took to funding scientific research which could provide alternative explanations of smoking-related disease e.g. in genetics. Scientific argument that other causes were known provided material for (i) media debate about whether or not smoking was a fundamental cause of the society-wide increase in lung cancer, and (ii) in legal actions, whether it was the cause in any individual case.

The industry enlisted a number of prestigious scientists to distribute their research grants. These had a typical profile of involvement in defence projects before going to academia or national research institutes, strongly anti-communist views, and involvement in Republican governments as advisers or administrators. They were likely to favour the involvement of private enterprise in scientific reseach. They explicitly intended to develop a pool of scinetific experts who would be prepared defend the interests of the tobacco industry in court or in the media on the basis of their research.

Chapter 2: Anti-ballistic missile defence

1980s. A similar pattern is visible here. Several of the leading figures in the case of tobacco reappear. During Reagan admin. advisers promoted a foreign policy based on acchieving strategic superiority, rather than a deterrent balance of power. They cast doubt on current assessment of tthe Soviet threat, and looked for a means of winning a possible nuclear war through anti-missile defence (Strategic Defence Intitiative: SDI).

There was strong opposition to SDI amongst academic scientists, who argued that an anti-missile system was untestable in practice, therefore unreliable; and that war would lead to a global nuclear winter created by smoke and dust in the atmosphere.

Disagreement arose over the research on which the nuclear winter idea was based. It involved atmospheric modelling which was in an early stage of development, and as work continued some initial extreme predictions were modified (though they remained severe). In pursuit of their campaign against SDI, some oppositional scientists had gone public with dramatic early results of their research which were not upheld later, and so weakened their case. SDI supporters (organised as the George Marshal Institute) could claim that the alteration of predicted outcomes showed the nuclear winter theory was uncertain, and that anti-SDI campaigners were politicising the science. On the other side, a leading SDI supporter involved in a joint paper intended to present a balnced view appeared to have rewritten the views of some other contributors without consulting them. The contoversy shows an all-round abuse of scientific procedures which served to undermine the credibility of scientific contributions to policy-making.

Chapter 3: Acid rain

1963 emissions from tall smoke stacks found to be causing acid rain which was polluting water and vegetation over long distances. Although this conclusion aroused scepticism in some quarters (including the press) a positive bi-partisan approach was adopted by US politicians, and action taken to repress emissions, during the 1970s and ‘80s. In Europe regulations were made against cross-border pollution. Reagan presidency, from 1980 refused further regulatory action, and rejected co-operation with Canada on the issue. A panel of scientists commissioned to review the evidence on acid rain was pressured politically to dilute its conclusions through presence of F. Singer, White House nominee and presitgious atmospheric physicist. A cost-benefit analysis was applied in which uncertainty was created by the difficulty of assigning values to environmental goods. Recommended policy was based on free-market assumptions about costs and effects of government intervention, and the cap-and-trade system was adopted. This did reduce acid rain by 54%.

By 2009 acid rain was still a major problem. The cap on emissions was too high. Regulation would have increased effectiveness of emissions reductions, and provided an incentive to innovation in emissions-reduction technology.

Ch 4: The ozone layer

1969: Concern about depletion of ozone layer, and consequent increase in cancers, aroused by stratosphere monitoring programme connected with project for supersonic airliner. 1970: risk detected to ozone layer from chemicals in widely used household products (fridges and aerosols). 1971 press articles began to appear on the issue, and industrial pressure groups moved to challenge scientific conclusion that industiral production is implicated. Further evidence emerged from NASA space programme. 1975 Ford presidency gave Academy of Sciences job of determining whether there should be a ban on ozone-depleting CFCs. Variety of experimental results being obtained during year’s work used by skeptics to claim the research does not yield certainty, and then mis-represent 2 year deadline for action to regulate mandated by Academy as meaning nothing need be done for the time being. Regulations introduced in 1977, but publicity of case was already prompting public to reduce use of CFCs, and industry to find alternatives.

1985 discovery of Antarctic ozone hole led to international negotiations on regulation. Global research effort gave diverse results but built a sufficent case for Montreal Protocol on ozone protection (1987). Opposition campaign developed exploiting variety of data yielded by research projects to claim case against CFCs is umproven, in which F. Singer is prominent, in assocation with strongly ant-Communist Moonie Church, via reputable newspapers and publishers which it owns. His arguments become frankly political, claiming that scientists involved in ozone research are motivated by hostility to free-market capitalism. This political attack on atmospheric researchers extends in the 1990s into attacks on climate change research.

Ch 5: Secondary smoking

In 1970s tobacco industry found that “side-stream” smoke was toxic, and had many projects to try to counter the evidence (eg “sick building syndrome”). In 1992 Environmental Protection Agency (EPA) report stated unequivocally that secondhand smoke causes lung cancer and has a detrimental effect on the health of children. On prompting of Philip Morris and other tobacco firms, this conclusion was attacked over its research method (not giving equal stress to alternative possible causes) and as an instrument of political repression - ( the EPArepresented as an instrument of state control of individual behaviour). Sympathetic scientists (including Singer) and rightwing think tanks promoted these arguments in the media. Parallel campaigns were started in the UK, also stressing individual liberty. In spite of the health consequences highlit by EPA, Morris made record profits in 1995.

Ch 6: Climate change denial

In 1970s and ‘80s US governments were taking the science suggesting threats of climate change seriously. Greenhouse gas physics and potential for climate change from fossil fuel burning known from since late 19th/early 20th century. In 1970s anxiety grew about human impact on environment and climate, and Nixon establsihed the EPA. 1980s official examinations of question looked at environmental and economic impacts, with some of the investigators (economists in particular) advocating delaying decisions, relying on mitigation of specific environmental impacts, and technological fixes. 1989 a Marshall Institute paper ‘What does the Science tell us’ persuaded Reagan administration that global warming was caused by sun activity. ‘Balancing’ of views in media did not distinguish between scientifically credible and politically partisan arguments. Deniers viewstypically had mass distribution and scientists’ rebuttals were only in scientific publications – hence denial achieved majority acceptance in the US, and politicians went along too. The IPCC, established 1988, presented first report 1990. Its conclusions challenged by Singer in publication misrepresenting conclusions of a fellow scientist to claim that important former proponents of action against global warming were changing their minds. Objections and refutations were met with legal action which suppressed debate. Republican party, pro-Republican press, and governments of fossil fuel exporting countries increasingly adopted denialist position, leading to refusal of US to ratify 1997 Kyoto Protocol, despite weakness of latter. Campaign has continued against subsequent IPCC assessments.

Ch. 7: Revival of DDT contoversy

In 1960 Rachel Carson worte Silent Spring presenting research which showed DDT , used against malaria-carrying mosquitos, was killing a range of other creatures including valuable pest-predators. She suggested it might also be harmful to humans. It was banned except for closely specified uses in the US in mid 1970s, justified on the basis of the ‘precautionary principle’ in view of potential damag to environment rather than humans. Subsequent results from monitoring the health of populations exposed to DDT showed rise in cancers in areas where it had been used (x5 for breast cancer).

In 2000s rises were publicised in malaria rates, and opportunity was taken to attack Carson’s work and the earlier anti-DDT lobby as responsible for resurgence of the disease bu discouraging its use. The attack was unjustified, since rising resistence in mosquitos to DDT had been noticed before US ban (which was not world wide anyway, so use continued elsewhere and could be monitored). Carson was attacked for writing about the subject in an emotive style by authors who claimed banning DDT had caused more deaths than the Nazis. The scientific bases of the arguments about DDT were swamped by appeals to support for the free market.

Conclusion not available.

Discussion: (amongst other things) suggested there should be some sort of legal sanctions against abuse of peer-review process, and deliberate mis-representation of research results.