

The Doll's House:

**Professor Sir William Richard Shaboe Doll -
The World's Leading Cancer "Expert" -
And Apologist For The Chemical Industry:
An Appraisal Of His Life's Work**

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Baron, Alexander

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Liars! Everywhere! - Edward Goldsmith

This publication is entirely my unaided work. Any errors of fact or interpretation are therefore likewise entirely my own.

INTRODUCTION AND ACKNOWLEDGEMENTS

The following analysis was originally commissioned for the *Ecologist* by former editor Edward Goldsmith but was not used, ostensibly due to its not quite being written in house style but possibly due to legal problems which might result from its publication. (1) Having re-read it many times I am confident that it is not libellous, so it is reproduced here verbatim.

I first met Goldsmith when I interviewed him late 1989 (or possibly early 1990). I was commissioned to write an article on Sir James Goldsmith's elder brother by a magazine which then rejected the story; fortunately, I managed to sell a different version of it to the *Investors' Chronicle*, (2) and, being interested in environmentalism from an early age when I read Kenneth Mellanby's *Pesticides And Pollution*, I helped myself liberally from the pile of back issues of the magazine which Goldsmith offered, and kept in sporadic touch.

On Saturday, 7th March 1992, I attended a conference organised by FOREST (Freedom Organisation for the Right to Enjoy Smoking Tobacco) at which one of the speakers, Simon Wolff, (3) put forward the hypothesis that although smoking causes lung cancer, without air pollution, in particular, diesel, we would see very much lower rates of lung cancer. Subsequently I interviewed Professor Wolff and sent a copy to Goldsmith. He phoned me and told me a few home truths about Professor Sir Richard Doll, (which I cannot publish here). He also told me that he had two big box files on the distinguished cancer "expert" and that I was welcome to come over and study them for myself. I went down to his grand terraced house in Richmond and borrowed both files, photocopying great tranches, and also passing them on to my colleague Judith Hatton. Later, I went up to Oxford to interview Professor Doll. This pamphlet is the result.

I have done quite a lot of research in this field, (4) and would like to have done more, but, not being an "academic", there are no sources of funding open to me, something which is of paramount importance when researching any subject in depth. I have also been sidetracked to some extent by equally fascinating - and at times dangerous - research in a totally unrelated field.

On November 28th 1993, three men turned up on my doorstep and proceeded to batter me about the head, arms, legs and liver with hammers. Fortunately, such overt hostility is not usually shown to dissidents in this field, but there is a mind-set at work which, if not physically, then in other, more subtle ways, wages war against heretics, as Hans Eysenck well knows.

I would like to thank especially the following persons who made this short study possible: Edward (Teddy) Goldsmith; Chris R. Tame, Judith Hatton, Juliet Wallbridge and Marjorie Nicholson (nee Brady) of FOREST; Professor Simon Wolff; Professor Hans Eysenck; and, of course, Professor Sir William Richard Shaboe Doll.

Alexander Baron

23rd December, 1993.

AN APPRAISAL OF THE WORK OF RICHARD DOLL

Few men have exerted greater influence on medicine this century than Richard Doll. Professor Doll, who, along with Sir Austin Bradford Hill, is regarded as the man who forged the link between smoking and lung cancer, is still going strong at the age of eighty-one. His qualifications are indeed impressive: although retired, Professor Sir William Richard Shaboe Doll, Emeritus Professor of Medicine, University of Oxford, has been Honorary Consultant to the Imperial Cancer Research Fund at the Radcliffe Infirmary, Oxford, since 1983, and is, among other things, a Fellow of the Royal Society, and an OBE. He sat on the Royal Committee on Environmental Pollution 1973-79 and received the 1979 General Motors Cancer Research Foundation Award. For a man of his age he is in surprisingly good health, and, when one considers that he had a kidney removed in 1944 and cheated death no less than three times (5) he is not just in good health but a veritable walking miracle.

Sir Richard's career has been no less remarkable, not the least because of the official endorsements which have been given to some of the extraordinary conclusions he has drawn from his researches. Early on in his career he investigated the effects of radiation on cancers. And found there weren't any!

"I studied the pension records...in connection with the nuclear weapons tests in the Pacific. This showed absolutely no effect of radiation on cancers. There was a slight query about leukemia, but the problem was that the controls we compared them with had a quite unexpected deficiency of leukemia compared with the rest of the country, but as far as cancer generally was concerned they had absolutely spot on the same mortality as servicemen who had not participated in the tests. This was on very large numbers." (6)

This was not only remarkable but lucky for the men involved. And for the government too, presumably, which naturally avoided both a scandal and a massive payout to the non-existent victims.

Sir Richard has made some equally remarkable findings - perhaps one should say non-findings - in his investigations into the Spanish Oil scandal and the non-effects of asbestos, but his reputation has been built on his (in)famous Doctors' Study, which began shortly after World War Two.

Sir Richard was invited to work on this study by the late Sir Austin Bradford Hill, the founding father of medical statistics. Sir Austin, who died in 1991, was the author of *Principles of Medical Statistics*, (7) the standard work on the subject now in its 12th edition. (8) Hill and Doll published their first set of results on smoking in 1950. Professor Doll's "ten years observations" were published in the *British Medical Journal* in 1964 (9) and his "twenty years' observations" in 1976. (10)

The thesis of Professor Doll's life's work is that cigarette smoking is responsible - in isolation - for the overwhelming majority of lung cancers, that it is unquestionably linked to coronary heart disease, that it causes all manner of other diseases, is responsible, on average for 10, 15 or 23 years loss of life - depending on which set of ICRF figures you believe - and that there is, if not absolutely no risk at all of lung cancer from air pollution, then no risk worth worrying about.

There is in fact a mind-set in this particular field of medicine: specifically that smoking is the root of all evil and that not only has this connection been made beyond all reasonable doubt but that no other factors are worth squandering precious time and money researching. Professor Doll and his collaborators - who have been termed, not entirely disparagingly, the "lifestyle academics" - have been responsible more than any other parties for the construction of this mind-set. It has now become more than a mind-set, it has become a dogma. And like all dogmas it is built on sand. But how did it come about in the first place?

According to Professor Doll, the Doctors' Study was set up because of the great increase in mortality of cancer of the lung that had been recorded over the previous thirty years. In 1947, a Medical Research Council conference had met to consider the reason for the increase. One hypothesis was that it might be an artifact due to better diagnosis. (11) However, although that idea was not entirely ruled out, it was considered unwise to make this assumption, and Bradford Hill was appointed to carry out a study to find out for certain. He asked Doll to join him.

It is at this point in time that the actual purpose of the study becomes obfuscated. According to Professor Doll, the original study was not concerned with pinning the blame on smoking.

"...I didn't think smoking had anything to do with it. What Bradford Hill and I did was draw up a list of all the things we could think of which increased in prevalence and to which people had been exposed more over the previous fifty years..." (12)

Doll's first suspicion was, he claims, that the still relatively new motor car had something to do with it. Professor Simon Wolff (13) asked Doll for documentation on this but Professor Doll told him that none exists and that he will just have to take his word for it. (14)

Professor Doll's claim that the study was not about smoking but about lung cancer doesn't quite wash. "[Within] a few months actually of studying it, it became obvious that the differences in smoking habits between lung cancer and other patients were much, much greater than any other differences." (15)

Simon Wolff is of the opinion that the nexus between smoking and lung cancer was established rather *too* quickly, and puts this down to vested interests - specifically that the road transport lobby was, and remains, a lot more powerful than the tobacco industry. It is not necessary to postulate any great conspiracy at work here, but another factor could well be that by this time, the government had already decided to embark on its road building programme, and that nobody in the relevant department was interested in trying too hard to pin the blame for increased lung cancer rates on factors other than tobacco. Like oil or diesel.

The Doctors' Study

This remains the definitive study of smoking and lung cancer, and although very much bigger medical trials have been carried out internationally in recent years, this trial, which at the start was carried out without the assistance of computers, is still impressive today. For scale if not for methodology.

In October 1951, a short and simple questionnaire was sent to the 59,600 men and women whose names were on the current *Medical Register* and who were resident in the United Kingdom. The questions put were: how old are you; do you smoke; are you an ex-smoker; if so, at what age did you start smoking; how much do you smoke; at what age did you last give up? (16)

A total of 40,637 completed replies were received, 34,445 from men and 6,192 from women. A random one in ten sample was then selected. (17) Because doctors are easier to keep track of than most other populations, they managed to retain 99% of the sample, and, as Professor Doll says, it quickly became apparent that smoking was the culprit. But was it? Although the study did indeed find a strong correlation between smokers and lung cancer, one that has been confirmed many times since, that is far from the end of the story.

In the first place, the Doctors' Study has been criticised on a number of grounds. The most obvious is that this is not a randomly selected group on two counts: 1) all those selected were doctors! 2) that the group who responded were self-selected. Doctors are in any case a far from typical population: "They're twice as likely to die in motor accidents, three times as likely to be alcoholics, suicides or divorced and at least thirty times as likely to be drug addicts. They're also more likely than any other section of the population to be represented in the Chamber of Horrors!" (18) One would also expect them to be more health conscious and not least to be more affluent, and more intelligent than the general population. There are other objections too, including the frailty of human testimony. (19) Though probably the crowning insult to the Doctors' Study is that to this day it is used as a model of how *not* to carry out an epidemiological study! (20)

It is not fair though to put all or even any of the blame for this on Professor Doll; to begin with, the study was not his idea, and initially at any rate, resources were scarce. (21) But this cannot be used to excuse Doll's and others' subsequent position - that smoking appears to have become progressively more dangerous over the years.

Since the association of lung cancer with smoking was established, and particularly over the last decade, increasingly bizarre claims have been made about the number of premature deaths due to smoking. (22)

Such statistics are plucked out of thin air and thrown around with gay abandon. A FOREST information sheet cites the following:

Alleged Deaths Per Annum (23)	Source	Date
50,000	<i>Gloucester Echo</i>	8th February 1983
95,000	<i>The Journal (Newcastle)</i>	4th January 1984
50,000	<i>The News (Portsmouth)</i> (24)	28th February, 1984
100,000	<i>Daily Express</i> (25)	11th March, 1987
110,000	<i>The Times</i> (26)	21st February, 1991
150,000	<i>The Times</i> (27)	27th August, 1991
100,000	<i>The Scotsman</i>	31st January, 1992
111,000	<i>The Daily Telegraph</i>	4th February, 1992
111,000	1993 NNSD Fact File (28)	1993

Hans Eysenck has written of such statistics that they are "extrapolations from epidemiological figures...and have no scientific meaning of any kind." (29)

Smoking And Something Else

It is of course patently absurd to place all such deaths at the door of smoking. Except to Professor Doll. His most recent claim is that smoking, and smoking alone, results in 150,000 premature deaths in the UK. (30) This leaves hardly any deaths at all attributable to other factors, of which there are several. We need not discuss here genetic predisposition to cancer or other diseases nor the psychological factors associated with smoking and cancer, (31) but one factor which is clearly important, and which has been played down and all but ignored, is air pollution. Needless to say, Professor Doll himself plays down this association. When asked: "There is though a connection between living in towns and lung cancer?"

Professor Doll replied: "Well, yes, a small relationship there was, though it's disappearing now, but this could be explained almost wholly if not wholly by the difference in cigarette consumption between towns and the countryside, particularly people in the countryside tended to go on smoking pipes longer; they switched over to cigarettes later, and on average they smoke less than people in towns. Now with the change in smoking habits we've seen mortality in London going down, and some of the Northern cities where it's gone up, so it's not even true to say it's in towns now, it's in selected towns." (32)

This is more of Professor Doll's nonsense. As long ago as 1959, the *British Medical Journal* (33) carried an article which pointed to the higher death rates among town dwellers than among country dwellers, particularly for bronchitis and lung cancer. And even then this was nothing new. (34)

Then there was the 1986 "Chinese peasant study" (35) in which, in the words of Simon Wolff: "...in rural China, where people tend to smoke very heavily and where air pollution is much less, the differences in lung cancer rates between smokers and non-smokers is very small, also, the lung cancer rates are about one tenth of the lung

cancer rates in industrialised countries. This observation was made time and time again in the 50s and 60s when there was great debate about the cause of lung cancer." (36)

Professor Doll makes light of this: "...the explanation of the Chinese data is interesting and has something to do with air pollution, but of course, the idea that lung cancer was due to air pollution (in this country) was around long before the idea that it was due to smoking, and there was an immense amount of research done to try to relate lung cancer to the effects of atmospheric pollution, and this has been examined by a number of international committees over the years and it's been agreed that possibly up to 10% of the lung cancers in men might have been due to atmospheric pollution in combination with smoking.

"What's been found is that in the absence of smoking there is no detectable difference in the risk of lung cancer in different areas, irrespective of the amount of atmospheric pollution. There is some evidence that in the presence of smoking, heavy smoke pollution (and by heavy I mean much, much worse than we ever see nowadays). This might have increased the risk of lung cancer in smokers by some 10% or so. That's not controversial, but it's a small effect, and it has practically no detectable effect in the non-smoker." (37)

This is nonsense, as is his "explanation" for the incidence of cancer in Chinese women: it's because they cook with woks! Professor Wolff describes Doll's claptrap about "very heavy air pollution possibly contributing a 10% excess risk in smokers" as "nonsense of the first order". He adds that "The studies he quotes do not exist. His work has helped make sure they were never carried out." (38)

Nor are Professor Doll's opinions of diesel shared by Professor Wolff. Asked if he thought there were a lot of nasty carcinogens in diesel, Professor Doll replied: "No more than in non-diesel. If diesel engines are operated properly, they should produce less carcinogens than ordinary cars." (39)

Professor Wolff on the other hand replied: "I'd say so. It produces more soots, and I think soots act as very good carrying agents to get things deeper into the lungs." (40)

And when asked to itemise some of the "ingredients" of car exhaust, he replied, "You've got the soots then you've got all the polyaromatic substances - lots of six chain rings stuck together with interesting nitrogen/oxygen groups stuck onto them. These are some of the most reactive and unpleasant carcinogens that we know churned out in vast quantities. Something like 5% of the output of a car is benzene, which is a well-known cause of leukemia." (41)

Professor Doll also makes light of the vast racial (national?) disparities in lung cancer rates. He even goes so far as to deny their existence.

"There is no evidence of a racial factor: blacks, Chinese, Japanese, whites, all have about the same risks. There are ethnic or racial factors in a few cancers, but not in lung cancer." (42)

This statement is not just misleading, it is totally wrong. For example, Epstein and Eysenck have both pointed to racial disparities which cannot be explained away by mere tobacco consumption, as has the Danish doctor Tage Voss. (43) Eysenck reports that risk ratios of smokers to non-smokers vary greatly: seven predominantly

Caucasian populations were found to have an average mortality ratio of about ten, ranging from 7.0 to 14.2; the heavy-smoking Japanese had a rate of 3.8; while in Northern Thailand the rate was a mere 1.6. (44)

Epstein has reported that Doll and his sidekick, Peto, excluded from their analysis of American cancer rates, blacks and the over-65s, "just those groups with the highest and increasing cancer mortality rates." (45)

Like psychological factors, it is as yet unclear how significant racial factors are in lung cancer. But it is far more likely that racial factors are really disguised environmental factors: eg it is not being Japanese but living in Japan which is responsible for the vast difference in cancer rates. (46) And the most likely culprit is the air they breathe.

Professor Doll though gives short shrift to anyone who offers an alternative - and more plausible - hypothesis to his smoking-is-the-root-of-all-lung-cancer claptrap.

Of Passey, who showed that the mean age of onset of lung cancer is the same in heavy as in light smokers, (47) Doll says, "[He] exhibited a complete lack of understanding of statistics when he made this statement, which was quite erroneous." (48)

Of Professor Burch, with whom Doll engaged in a debate through the pages of the *New Scientist*, (49) he says, "[He] didn't really understand medical statistics. He certainly didn't understand the diagnostic process of cancer...to claim that all the increase was due to improved diagnosis just shows a complete ignorance of medical matters." (50)

But as Hans Eysenck points out, "Birch [sic] actually spent most of his professional life as a professor in the field of medical physics dealing with such statistics, and was famous for his work in that field." (51)

While of Eysenck himself, after dismissing his work out of hand, Doll says, "...I haven't studied it myself apart from his criticisms of the relationship between smoking and lung cancer, and they I do know just don't stand up..." (52)

To this, Eysenck responds, "This is hardly a good scientific basis for criticising a large body of empirical work and theoretical argument!" (53)

Finally, of Samuel Epstein, the leading critic of Professor Doll's lifestyle fantasy, the learned man says, "He makes a living out of it. He charges a great deal for giving lectures on the subject, and giving evidence in court on oath...I wouldn't call him a crank, I would say he's just someone who's making a living out of taking a particular viewpoint which appeals to the public. He gives lectures on it, writes books about it and gives evidence in court, but he doesn't produce any scientific evidence in support of his claims." (54)

Epstein's claims amount - in a nutshell - to there being a massive conspiracy at work by industry. (55) Of this, Doll says, "Yes. It's a popular concept but just not true." (56)

Epstein's comments on this, extracted from a four page letter, were that, "With regard to my own interests, the overwhelming lectures I give [sic] are to the general public, and public interest groups (apart from scientific presentations) for whom I do not, or have ever, charged fees (often in fact, even paying my own travel expenses). Over the last decade, I have acted as an expert witness in toxic tort litigation, and in such forums emphasize those same viewpoints and positions which I have de-

veloped and published over three preceding decades. Funds from such activities help support my public interest work, besides paying for part time secretarial assistance." (57)

It should be noted that the implication of venality - which Professor Doll raises against Professor Epstein - could well be levelled at him. When I interviewed him he had just returned from (a presumably all-expenses paid) jaunt to New York. He has also made a lucrative living out of whitewashing industry and "blaming the victim" for cancer. (58)

Professor Doll also seems to be suffering from confusion on the mechanism of carcinogenesis. When asked if it is true that there has not yet been found any such mechanism for tobacco to cause lung cancer, he replied, "Oh no, that's completely untrue. There are at least fifty chemicals in tobacco smoke which are known to cause cancer in animals, and the mechanism by which they do that is perfectly straightforward: they form adducts with DNA and they cause mutations in DNA just like any other carcinogen." (59)

This is just not true. The reality is, that for all the countless billions spent on researching the association of smoking and lung cancer, "We know so little about any disease; we certainly have no idea whether or how smoking would cause cancer." (60)

Professor Doll's lack of respect for Professors Burch, Epstein and Eysenck is not matched by his disdain for Professor Wolff. He claimed simply never to have heard of him, (61) something Professor Wolff himself finds surprising. (62)

If Professor Doll's claim of 150,000 premature deaths a year due to smoking is absurdly precise, his claims regarding cancer and diet are so nebulous as to be worthless. Take the following:

"[Thirty per cent] was a rough guess, which it is not in the case of smoking. There are other factors, of which dieting is the outstanding one, which one has pretty good evidence that it affects the incidence of cancer, but you can't say precisely how much effect it is having. The 30-35% which Peto and I gave, and which I still adhere to, is a rough guess, but it might be twice as much as that, and it might be half that." (63)

In other words, diet could be responsible for anywhere between 17-18% of (all) cancers and 70%. Another order of magnitude and it could be responsible for all or none.

Professor Doll and Asbestos

The learned Professor has also come in for severe criticism from SPAID (the Society for the Prevention of Asbestosis and Industrial Diseases), not for his work on smoking, but for his claims relating to the lethality or otherwise of asbestos.

A 1985 article in the *Sunday Times* (64) which cited Doll's then forthcoming study (65) was panned by the Society's Nancy Tait. Among the claims that Professor Doll made was that buildings which contain asbestos usually have dust levels so low that exposure for 40 hours a week would produce a lifetime risk of death of approximate-

ly one in 100,000 or one death in Britain a year, and that "passive smoking" is 90 times more lethal.

This is obviously another one of Professor Doll's fanciful extrapolations. (66) As the same article estimated that claims against the asbestos industry could amount to \$150 billion, it is obvious that the insurance industry, if not Miss Tait, was pleased with Sir Richard's report.

In her letter to the *Sunday Times*, (67) Miss Tait reports that 645 people died from asbestos-induced illness in 1983 (68) - Tim Rayment's article claimed more than 400 deaths, which is technically true but misleading. She also pointed out that Sir Richard uses a plethora of "estimates, adjustments, approximations and hypothetical figures" in order to arrive at his extraordinary figure. (69)

This is not the first time that Miss Tait's organisation has taken issue with Sir Richard Doll's pronouncements. In a letter to the Professor two years previously, she pointed out that a SPAID study of mesothelioma patients at Hackney Hospital showed that "not one patient has worked in an asbestos factory and that when investigated adequately, the association with asbestos can be established in mesotheliomas previously reported as unconnected with asbestos." (70)

SPAID soon came to the conclusion that "using asbestos is more dangerous than manufacturing it", but the DHSS and the Medical Research Council dismissed their criticisms as biased without producing any substantiation or corroboration of this claim. (71) One of the "experts" who has dismissed SPAID as biased is Sir Richard himself, but in view of his work in exonerating the chemical industry and excusing the air pollution lobby, he can hardly be called unbiased himself.

The Spanish Oil Scandal. Or Was It?

Sir Richard has not always pandered to the whims of the oil companies though. When he was called in by the World Health Organisation to investigate the Spanish "cooking-oil case", he did not testify to the benignity of the oil concerned, but instead indicted it as the source of the mysterious disease which had been responsible for hundreds of deaths and illnesses since the spring of 1981.

Officially, the outbreak of "toxic oil syndrome" and the resulting scandal which ended in the trial of 38 oil merchants, began on May 1st 1981. Six members of a family were taken ill and one, an eight year old boy, died. (72) By the beginning of June, hundreds of people were falling victim to this mysterious disease every day; its symptoms included: cough, diarrhoea, fever, headaches, muscle pains, nausea, pulmonary oedema and vomiting. After twelve days, a Dr Angel Peralta had identified the cause of the illness as intoxication due to organophosphorus insecticide. (73) What happened next is the subject of some debate, but according to one report, the authorities instigated a massive cover-up. (74)

Certainly the laboratory analyses of the oil were disappointing: the alleged toxin in the oil was never found, neither could the symptoms of the disease be replicated in animal studies. A number of international authorities were called in, including the

World Health Organisation, and experts were flown in to tackle the problem. Enter Sir Richard Doll.

Sir Richard himself says of his role in this affair that, "I was called in...and in my first report I wrote that it looked very much as if the oil was responsible but it didn't meet all the requirements for proof. But then in the next six months some more evidence was produced by an American who was working for the Center for Disease Control in Atlanta...he produced some new evidence with regard to the dose-related response, in particular he showed that the risk was greater the greater the amount of this oil that you consumed." (75)

According to Gudrun Greunke's report, this was not quite the case. For one thing, "the thing that distinguishes the patients from their healthy relatives in any given family is the former's passion for eating salads...the more *toxic* oil a person consumed, the healthier he or she stayed." (76)

The authorities though were determined to blame the oil at all costs, so naturally they looked around for someone not only distinguished but "reliable". Few scientists in any field have as reliable a record as Professor Doll for confirming the establishment mind-set, so it was only a matter of time before he would be called in. (77)

Naturally, Professor Doll sees things slightly differently: "...the doctors in Spain who investigated the few cases which were said to have occurred outside the area in which these oils were sold, and the more these were investigated, the more it was shown that those affected had in fact had a meal in the affected area, or that they did not meet the criteria for the diagnosis." (78)

By the time Professor Doll was called in, scientists had spent years working on this case. His first report was dated October 1985 and concluded that although the oil was probably to blame, this could not be stated for certain. (79) By June 1987 he had done an about face and reported in an addendum to his report that these gaps had been filled, something he repeated in court. (80)

This, together with the doubts he expressed in writing his first report and fact that he was deliberately misled (81) is further confirmation that, rather than being a conscious liar, Sir Richard is someone who has long since realised that if he says the *right* things, he will be well-rewarded.

Was there any evidence that the pesticide was in some measure responsible, I asked him?

"No, there was absolutely none; this was put up as an Aunt Sally if you like. The pesticide that was accused did not itself reproduce the disease in animals, and was not in fact a particularly toxic material. There was really no epidemiological evidence linking the disease with the consumption of these tomatoes." (82)

It is perhaps a little unfair to blame Professor Doll totally for this, as Gudrun Greunke seeks to. He was far from the only dupe in this affair. In 1992, the World Health Organisation published a book on the affair which was about as nebulous a "report" as one could imagine. (83) Professor Doll did not contribute to this report although he is cited in it.

More than a decade after the outbreak of this mysterious epidemic, this was all the WHO had to offer: "...numerous projects have been encouraged and funded in various countries with, to date, almost entirely negative results. On the immunologi-

cal front, few advances have been made. More work needs to be carried out along these lines." (84)

On page 39, it is stated that by September 1990 there had been a total of 839 recorded deaths. On page 76, exhaustive tests with animals have all led to a dead-end: "Most studies have used rats...studies have been carried out on other species...mouse, guinea pig, hamster and rhesus monkey...the results obtained have been uniformly negative."

Whatever happened to Occam's Razor? If you can't find what you're looking for, then maybe you should try looking somewhere else. There can be little doubt that Sir Richard believes the "toxic oil" hypothesis that with all the passion that he believes the smoking/lung cancer hypothesis, and in this case he is not only in good company but is following rather than setting a trend. But however sincere Sir Richard (or anyone else) may be, blind, passionate faith in an empirically refuted hypothesis (smoking and lung cancer) is bad science. Bad science leads to bad social policy. And bad social policy costs lives.

Simon Wolff wrote to the author, "[Doll's] influence is immense and we have to hope that it has been consistently benign; but one now has the feeling that the cancer research establishment in this country has the function of saying that cancer is caused by smoking, or is associated only with the vaguest risk factors which we can study, but hardly hope to modify very much....Serious cancer risks such as exposure to carcinogens in the workplace; benzene in petrol; man-made carcinogens in water, food and air are played down...although they might cause a truly vast number of cancers." (85)

Edward Goldsmith - former editor of the *Ecologist* - believes that Professor Doll is a pawn in an enormous conspiracy by the chemical industry to suppress the truth about cancer and other environmental hazards and keep the bucks rolling in. A retired biochemist the current writer interviewed, a lady with enormously impressive credentials, also believes there is an enormous conspiracy afoot, but that it has very different aims to the one postulated by Goldsmith.

The reality is that there is no conspiracy at work here because a conspiracy cannot function on such a scale. What there has been and continues to be is subversion of the fabric of science by powerful vested interests, and the imposition of a mind-set which sees smoking as the root of all evil while turning a blind eye to the real culprit: industrial carcinogens. The nonsense espoused by Professor Doll over cancer and smoking - and it is nonsense of the first order - can be and indeed is repeated throughout the life sciences, for example, with regard to asbestos-related diseases, "saturated fat" and coronary heart disease, to "toxic oil syndrome", and possibly even to AIDS.

This mind-set has become extremely profitable for those who are willing to endorse it, showering them with awards, honours, fellowships, prestige, and, not least, with highly paid sinecures and consultantcies. Professor Doll has been instrumental in establishing the mind-set of the "lifestyle academics", indeed, he has been not only a major player but a highly successful one. Such venality runs throughout academia, and is if anything more pronounced in certain of the social sciences where academics learn that giving the "right" answers brings them good marks while giving the

"wrong" ones quickly brings the disapprobation of their tutors, superiors and indeed their peers.

We should not condemn Professor Doll too loudly for he has only been doing what he has been taught: to seek rewards. He has learned in his professional career what each of us learns in the cradle, that certain stimuli bring pleasure, while others bring pain. Our academics, including Professor Sir William Richard Shaboe Doll, have dedicated their postgraduate educations to inducing pleasant stimuli in their professional lives and have been dutifully rewarded. Even if some of them, like Sir Richard, have walked a thin line between academic honesty and commercial acceptability, and in doing so have plumbed the depths of the prostitution of science.

Notes And References

(1) Goldsmith did tell me that he would be happy for us to work on it together to tailor it to the magazine's requirements, but by the time I tried to contact him he was off abroad on one of his self-appointed missions to save the planet from Man's folly.

(2) *Green sheep of the family*, published in *INVESTORS CHRONICLE*, 12-18 January 1990, page 15.

(3) Professor Simon Wolff has been Lecturer in Toxicology at University College London since 1986.

(4) Judith Hatton has done considerably more and is still beavering away feverishly.

(5) As a medical student he pricked himself with an infected needle during the course of a post-mortem and contracted streptococcus septocaemia. During World War II he developed tuberculosis of the kidney - this was before streptomycin was introduced; fortunately it was only on one side; if it had been on both sides, that would have been fatal. He had the kidney removed in 1944. Then, in the late 1950s, he developed glutenenteropathy.

Interview with Professor Sir Richard Doll, 7th April 1993.

(6) Doll interview, (ibid).

(7) *Bradford Hill's Principles of Medical Statistics*, Twelfth Edition, by Austin Bradford Hill and I.D. Hill, published by Edward Arnold, London, (1991).

(8) The twelfth edition was published shortly after the great man's death at the age of 93 in April 1991.

(9) *Mortality in Relation to Smoking: Ten Years' Observations of British Doctors*, by Richard Doll M.D. and Sir Austin Bradford Hill, *British Medical Journal*, 30 May and 6 June 1964, 1, (pages 1399-1410 and 1460-7).

(10) *Mortality in relation to smoking: 20 years' observations of male British doctors*, by Richard Doll and Richard Peto, *British Medical Journal*, 25 December 1976, 2, (pages 1525-36).

(11) Professor Doll pooh poohs this hypothesis, but it is by no means a simple one to dispose of. For example, Professor Burch has pointed out that "[t]he rise in death-rates from lung cancer, over the period 1916-65...is accompanied by an almost equivalent fall in death-rates from pulmonary tuberculosis..." *

In the same work under the sub heading *Problems of diagnosis* he adds that one researcher (cited by Sehart, 1904), found 178 cases of lung cancer at necropsy, only six of which had been recognised in life. ** The problem of diagnosis is complicated still further because up until the second decade of this century most clinical conditions affecting lungs (in the USA) were called pneumonia or pleurisy if acute, and tuberculosis if chronic, while it wasn't until 1923 that cancer of the lung first appeared as a separate entity in the mortality data.

Writing as recently as 1991, Professor Hans Eysenck, citing Feinstein and Wells, (1974), added without a trace of sarcasm or irony that, "Cigarette smoking may con-

tribute more to the diagnosis of lung cancer than it does to producing the disease itself..." ***

* Page 331 of *The Biology of Cancer: a new approach*, by P.R.J. Burch, published by MTP Press, Lancaster, (1976).

** Page 327, Burch, *Biology of Cancer*, (ibid).

*** Page 32 of *Smoking, Personality, and Stress: Psychosocial Factors in the Prevention of Cancer and Coronary Heart Disease*, by Hans Eysenck, published by Springer-Verlag, London, (1991).

(12) Doll interview, (op cit).

(13) When he isn't lecturing, Simon Wolff works in his laboratory at the Rayne Institute. The only reason his qualifications are not as impressive as Professor Doll's is because he is about fifty years younger.

(14) Telephone conversation with Professor Simon Wolff, cApril 1993.

(15) Doll interview, (op cit).

(16) Doll and Bradford Hill, *British Medical Journal*, 1964, 1, page 1399, (op cit).

(17) Doll and Bradford Hill, *British Medical Journal*, 1964, 1, page 1399, (ibid).

(18) Taken from page 4 of *BACK TO WORK AT SEVENTY-THREE: Judith Hatton makes health fanatics fume*, published in *Pensioners' Voice*, May, 1993, (pages 4-5).

(19) Eysenck for example has noted that people often lie about their smoking habits.

(20) "The original case-control studies by Wynder and Graham and by Doll and Hill are still used in a famous epidemiologic exercise...where they serve as examples of what can go wrong: biased ascertainment of exposure, selection of cases and controls from different source populations, poor ascertainment of *caseness* etc..." From page 427 of *Invited Commentary: How Much Retropsychology?*, by J.P. Vandembroucke, Department of Clinical Epidemiology, Leiden University Hospital, *American Journal of Epidemiology*, Vol 133, Number 5, March 1, 1991, (pages 426-7).

(21) "The British Medical Association very kindly sent out the letters for us using their Addressograph, and we only had one assistant opening the letters, and that took about a year."

Working without a computer, Doll and Hill recorded their respondents' smoking habits in pen and ink, then on punch cards. "Later, we had a team of six or seven opening the letters." Doll interview, (op cit).

(22) According to a report in the *Times*, (February 16, 1993), the forty year follow up of the Doctors' Study purports to show that smokers are three times more likely to die in middle age than non-smokers. It is difficult to know how much credibility to attach to such a claim when one considers that the Imperial Cancer Research Fund - Professor Doll's principal employer - defines middle age as 40-69 years of age. (ICRF "*Fact Sheet*", September 1992).

(23) These include alleged smoking-related deaths from all causes - coronary heart disease, emphysema etc as well as lung cancer.

(24) Quoting the Royal College of Physicians.

(25) Quoting Edwina Currie.

(26) Quoting Mrs Virginia Bottomley.

(27) Quoting Professor Griffith Edwards of the Addiction Research unit at the Institute of Psychiatry.

(28) Quoting a 1991 report by the Health Education Authority.

(29) Page 19 of *Smoking and Health*, Eysenck's contribution to *Smoking and Society: Toward a More Balanced Assessment*, Edited by Robert D. Tollison, published by Lexington Books, Lexington, (1986).

It should be noted that these estimates include deaths from smoking-related diseases other than lung cancer, including COLD (chronic obstructive lung disease) and CHD (coronary heart disease). The subject of the link between smoking and CHD is beyond the scope of the present work, but it will suffice to say that Burch, Eysenck and others have found the evidence palpably unconvincing.

(30) Which he repeated in the April 7th, 1993 interview.

(31) The late Professor Burch developed a unique theory of disease, which he discussed at length in his 1976 book, *The Biology of Cancer: A New Approach*. A posthumous collection of some of his relevant scientific papers was published by Leeds University Press in 1989. *The Biological Basis of Disease*, edited by his collaborator Susan Chesters and his widow Jane Burch, herself a biochemist, also contains a complete bibliography of Professor Burch's scientific writings.

Professor Hans Eysenck has been researching the association of personality with smoking since the early 1960s. Eysenck's work is dismissed out of hand by Doll et al; some have gone so far as to accuse him of fraud.

(32) Doll interview, (op cit).

(33) *Cancer and Bronchitis Mortality in Relation to Atmospheric Deposit and Smoke*, by Percy Stocks, published in the *British Medical Journal*, January 10, 1959, (pages 74-9).

(34) "Residents in large towns of England and Wales have always been subject to higher death rates than country dwellers, and much attention has been given to this in the Registrar-General's reports during the last century....The death rates from bronchitis and lung cancer are higher than in any other country, as is also the amount of air pollution from domestic chimneys..." Stocks, page 74, (ibid).

(35) *Lung Cancer Risk at Low Doses of Alpha Particles*, by Werner Hofmann, Robert Katz and Zhang Chunxiang, published in *Health Physics*, Vol 51, No 4, October, 1986, (pages 457-68).

(36) Professor Simon Wolff interview, Wednesday, 13th May, 1992.

(37) Doll interview, (op cit).

(38) Personal correspondence from Professor Simon Wolff, May 13, 1993.

(39) Doll interview, (op cit).

(40) Simon Wolff interview, (op cit).

(41) Simon Wolff interview, (ibid).

(42) Doll interview, (op cit).

(43) *Smoking & Common Sense: One Doctor's View*, by Tage Voss, translated from the Danish by Johan Sonne Mortensen, English edition revised and edited by Paul Redfern, published by Peter Owen, London, (1992).

This is a very interesting book. Although written for the intelligent layman without a mass of footnotes and lacking an index, it provides an excellent introduction to this difficult and controversial subject for the man and woman in the street.

On page 49, the author makes the following observation: "In Japan, 85 per cent of all men smoke; and Japan has [sic] the world's lowest lung cancer mortality - 15 per 100,000 in the 1950s. But the younger generation - which has the same or lower tobacco consumption - shows a clear increase in lung cancer frequency, estimated at 100 per 100,000 by the end of this century. *The increased frequency does not follow smoking habits, and a connection must be sought in other risk-creating conditions.*" [Emphasis added].

(44) Eysenck, *Smoking and Health*, pages 33 and 35, (op cit).

(45) Page 64, *LOSING THE WAR AGAINST CANCER: WHO'S TO BLAME AND WHAT TO DO ABOUT IT*, by Samuel S. Epstein, *International Journal of Health Services*, 1990, Volume 20, Number 1, (pages 53-71).

(46) In his book on heart disease, *Eat Your Heart Out*, James Le Fanu points out that there is a general tendency for migrants to lose the disease patterns of their home country and to assume the disease patterns of their host.

(47) *Some Problems of Lung Cancer*, by R.D. Passey and M.C. Lond, published in the *Lancet*, 21 July 1962, (pages 107-12).

This explodes the pure causal hypothesis. Passey's work was cited by Professor Burch in his seminal book, *The Biology of Cancer*.

(48) Doll interview, (op cit).

(49) 21st and 28th February 1974.

(50) Doll interview, (op cit).

(51) Personal correspondence to author, April 27, 1993.

(52) Doll interview, (op cit).

(53) Personal correspondence, (op cit).

(54) Doll interview, (op cit).

(55) Perhaps mind-set is a better word.

(56) Doll interview, (op cit).

(57) Personal correspondence to the author from Samuel S. Epstein M.D, Professor of Occupational and Environmental Medicine, University of Illinois, April 28, 1993.

(58) This is not intended as an implication of venality. For distinguished academics like Professors Doll, Eysenck et al, the all-expenses paid trip to a conference in an exotic location is part of the package, as is prestige, media appearances, and on retirement an Emeritus Chair with no responsibilities and a free hand to conduct research.

(59) Doll interview, (op cit).

(60) Author's interview with Professor Hans Eysenck, February 16th, 1993.

This part of the conversation went:

"No idea about it at all? That's not the impression they [the media et al] give."

Eysenck: "That's not the impression they give, exactly! There's no causal relationship that has ever been established."

Question: "So it's never been induced in the laboratory?"

Eysenck: "Well, you couldn't with humans, and as the Surgeon General himself said, animal work is irrelevant because animals behave quite differently from humans."

(61) Doll interview, (op cit).

(62) "...it is a little surprising that he does not remember my recent contributions to the air pollution debate, given, for example, the fact that we have corresponded, appeared on the same programmes and so on." Simon Wolff letter, (op cit).

(63) Doll interview, (op cit).

(64) *Asbestos Panic can stop, says top cancer expert*, by Tim Rayment, *Sunday Times*, 21 April 1985, (page 4).

(65) *Asbestos: Effects on health of exposure to asbestos*, by Richard Doll and Julian Peto, Health & Safety Commission, HMSO, London, (1985).

(66) In the summary of chapter six on page 53, the following claim is made: "Exposure to this level [0.0005 f.ml^{-1} above background] for a working week in an office for 20 years in adult life or for 10 years or so at school...is calculated to produce a lifetime risk of death of one in 100 000."

Such extrapolations belong to the realm of fantasy. By the same logic, if taking one aspirin cures your headache tonight, taking a hundred will stop you having one for the next three months. In reality, such a dose would make sure you never had another one.

(67) Although I have received copies of certain of Miss Tait's documents in relation to Professor Doll's work with asbestos, I must stress that I have received no cooperation from Miss Tait whatsoever, just the opposite in fact, but that is her prerogative.

(68) Most of these people were not asbestos industry workers as was reported, and they were often in their 30s and 40s, ie, they were people who'd had brief contact with asbestos.

(69) Letter to the *Sunday Times*, 26 April 1985, (unpublished).

(70) Personal correspondence from Nancy Tait to Sir Richard Doll, 30 April 1983.

(71) Ibid.

(72) Report of Gudrun Greunke Witty to Edward Goldsmith, 15.11.1989, (page 1).

(73) Gudrun Greunke report, page 1, (ibid).

(74) Gudrun Greunke report, (ibid).

(75) Doll interview, (op cit).

(76) Gudrun Greunke report, page 4, (op cit).

(77) Gudrun Greunke attributes the "making the impossible oil theory respectable internationally" to Dr Tabuenca, but there is no doubt that having Doll's name behind it confirmed upon this hypothesis as much legitimacy as Professor Doll's bogus smoking/lung cancer hypothesis.

(78) Doll interview, (op cit).

(79) Gudrun Greunke report, page 7, (op cit).

(80) Gudrun Greunke report, page 8, (ibid).

(81) The data on a number of the cases were falsified, apparently in order to make them fit the paradigm. [Gudrun Greunke report, page 8, (ibid)].

(82) Doll interview, (op cit).

(83) *Toxic Oil Syndrome: Current Knowledge And Future Perspectives*, Foreword by Dr Roy Goulding of Guy's Hospital, published by WHO Regional Publications, European Series No. 42, World Health Organization Regional Office for Europe, Copenhagen, (1992).

(84) Page xvi, *Toxic Oil Syndrome*, (ibid).

(85) Simon Wolff letter, (op cit).

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