

SMOKING AND HEALTH

1940s – 1950s	
“carcinogenic properties” in tobacco	<p>1946.</p> <p>H.B. Parmele, a scientist working for Lorillard in the US, writes a memo to the company’s manufacturing committee: “Certain scientists and medical authorities have claimed for many years that the use of tobacco contributes to cancer development in susceptible people. Just enough evidence has been presented to justify the possibility of such a presumption ...benzpyrene is presumed to be a combustion product of burning tobacco and, by animal experiments, it has been shown to possess definite carcinogenic properties”.¹</p>
Independent Evidence begins to mount linking smoking and lung cancer	<p>1950:</p> <p>27 May: Dr. Ernst Wynder and Dr Evarts Graham from Washington University, publish a study in the <i>Journal of the American Medical Association</i> which shows that 95.6 per cent of lung cancer patients were moderately heavy chain-smokers; the majority whom had smoked for twenty or more years. The scientists conclude: “It appears that the less a person smokes the less are the chances of cancer of the lung developing and the more heavily a person smokes the greater are his chances of becoming affected with this disease”².</p>
	<p>30 September: Dr. Richard Doll and Professor Bradford Hill publish an article in the <i>BMJ</i>, which states that there is a “real association between carcinoma of the lung and smoking”³.</p>
Key Government group advice “case is proven”	<p>1951:</p> <p>27 March: The Central Health Services Committee (CHSC), Standing Advisory Committee on Cancer and Radiotherapy, the key Government group examining smoking and health report that “Professor Bradford Hill and Dr. Doll are satisfied that the case against smoking as such is proven”⁴.</p>
	<p>1952:</p> <p>6 November: Representatives from Imperial Tobacco (John Partridge, Secretary and Director, D. A. Clark and G. F. Todd) meet Dr. Green from the MRC and Professor Bradford Hill and Dr. Doll. According to Green: “It was pretty clear to me that Mr Partridge and his colleagues felt that Hill had answered all their queries in a way which left hardly any loophole for doubt, though they were reluctant to concede this⁵.”</p>
Evidence	<p>13 December: Dr. Doll and Professor Bradford Hill publish a second</p>

At the same time, company's own research finds carcinogens	Internal documents about B& W research activities record that "the Tennessee Eastman cellulose acetate filter known as the "Health Guard Tip" is reported to be in production. Cigarettes with the filter produce 42-46 % less tar and 19-35% less nicotine than the non-filtered competitors ... Cancer is 'investigated from a literature standpoint' in light of 'frightening testimony' from epidemiological studies. A carcinogenic hydrocarbon, benzo(a)pyrene, is partially isolated from tobacco leaf and smoke" ⁶ .
	A B&W advertisement in the Press states: "New <i>Health-Guard</i> Filter makes <i>Viceroy</i> better for your health than any other leading cigarette" ⁷ .
Industry research confirms link between smoking and lung cancer	1953: 2 February: Claude Teague for RJ Reynolds writes a "Survey of Cancer Research with Emphasis upon Possible Carcinogens from Tobacco", which concludes that: "On the basis of the information at hand it would appear that polynuclear aromatic compounds occur in the pyrolytic [burned] products of tobacco. Benspyrene and 'N-benspyrene [sic]', both carcinogens, were identified in the distillates ... Studies of clinical data tend to confirm the relationship between heavy and prolonged tobacco smoking and incidence of cancer of the lung" ⁸ .
Industry tries to disprove link in private.	February: Imperial Tobacco submits a report by G. F. Todd, Assistant Manager of the Statistical Department of Imperial to the CHSC attempting to disprove Doll and Bradford Hill's assertion that "smoking is a factor in the production of carcinoma of the lung" ⁹ .
But publicly respond to health problem.	17 March: The Chairman of Imperial Tobacco statement to Shareholders: "If it should ever be proved that there exists something harmful in tobacco, even in the minutest quantities, which could conceivably make smoking one of the causes of this disease [cancer], we should, I hope, be the first to take steps to eliminate it" ¹⁰ .
Association between smoking and Cancer established	6 November: The Statistical Panel appointed by the Chief Medical Officer, dismisses Todd's assertions of bias and state "we are therefore of the opinion that the main conclusion reached by Doll and Hill, that there is a real association between smoking and cancer of the lung, is firmly established" ¹¹ .
US evidence accumulates	December: The US journal <i>Cancer Research</i> publishes details of experiments undertaken by Dr. Ernest Wynder on mice, which show that 44 per cent of animals whose skin was painted with smoke condensate developed cancerous tumours. Wynder notes that the "suspected human carcinogen has thus been proven to a carcinogen for a laboratory animal" ¹² .
Industry needs	14 December: Timothy Hartnett, B&W's President writes a memo urging "excessive caution ..in the methods we adopt to counteract these claims", recommending a two-pronged PR attack to "get the

two pronged attack to “delicate” problem	industry out of this hole”. (1) “unstinted assistance to scientific research”, although this caused a problem of “how to handle significantly negative research results if, as and when they develop” and (2) “the best obtainable” PR company since there “has never been handed so real and yet so <i>delicate</i> a multimillion problem (italics in original). ¹³ ”
US industry meets to devise PR campaign	15 December: The leading American tobacco companies meet in New York to develop a campaign to counter the negative publicity surrounding cigarettes. Minutes show that “The industry is strongly convinced that there is no sound scientific basis for the charges that have been made ... They realise that the industry should not engage in a merely defensive campaign ... They should sponsor a public relations campaign which is positive in nature and entirely ‘pro-cigarettes’” ¹⁴ .
Stop public panic and restore confidence	The PR company Hill and Knowlton is hired to formulate a campaign which includes setting up a Research Committee, which will sponsor “independent” scientific research into smoking and health, and to announce this new initiative to the press ¹⁵ . A Hill & Knowlton memo, outlines that: “We have one essential job -- which can be simply said: Stop public panic ... There is only one problem -- confidence, and how to establish it; public assurance, and how to create it . . . And, most important, how to free millions of Americans from the guilty fear that is going to arise deep in their biological depths -- regardless of any pooh-poohing logic -- every time they light a cigarette” ¹⁶
Link between smoking and lung cancer established.	22 December: In the UK the Standing Cancer And Radiography Advisory Committee subsequently recommend to the Minister of Health that: “It must be regarded as established that there is a relationship between smoking and cancer of the lung” ¹⁷ .
Frank statement draft	26 December: An early draft of the US press initiative, called the Frank Statement, includes the following text, which is struck out before publication: “We will never produce and market a product shown to be the cause of any serious human ailment ... The Committee will undertake to keep the public informed of such facts as may be developed relating to cigarette smoking and health and other pertinent matters” ¹⁸ .
Frank Statement – Industry pledges research	1954: 4 January: The formation of the US Tobacco Industry Research committee (TIRC) is announced in “A Frank Statement to Cigarette Smokers”. It read: “Recent reports on experiments with mice have given wide publicity to a theory that cigarette smoking is in some way linked with lung cancer in human beings ... We accept an interest in people’s health as a basic responsibility, paramount to every other consideration in our business. We believe that the products which we make are not injurious to health. We are pledging aid and assistance

	to the research effort into all phases of tobacco use and health”.
UK government accepts statistical link points to causal link	26 January: A memo from the UK Health Minister for the Cabinet Home Affairs Committee states: I have “come to the conclusion that the statistical evidence does point to a causal relationship between tobacco smoking and lung cancer, but that there are important qualifications. There is no precise evidence of how tobacco smoking causes lung cancer or indeed of the extent to which one causes the other ¹⁹ ”.
UK industry pledges secret cash for research	An amendment to the memo states “the Medical Research Council have recently received an offer from certain British tobacco companies to put up money for research into the causation of cancer of the lung. This offer is under active consideration at this time ... The tobacco companies are said to be very anxious to remain anonymous, and certainly their negotiations with the MRC have been carried out in secrecy ²⁰ ”.
US PR company meets UK industry	26 March: John Hill from Hill and Knowlton writes of a meeting he and a London based colleague had had with Sir Robert Sinclair and John Partridge of Imperial and Mr D Oppenheim, Chairman of BAT. According to Hill: “The British Tobacco group is vitally interested in what we do because the repercussions of what happens in the US will affect Great Britain and vice versa. The British tobacco industry is particularly unhappy over the positive statement of the British Minister of Health that ‘There is a relationship between smoking and cancer of the lung’. No proof exists of any such relationship, said Sir Robert”. “It was pointed out by the British group that by contributing to the Medical Research Council they were supporting research unconditionally and at Government level into the cause of cancer generally, and not just into the problem of the relation of Tobacco to a particular form of cancer. This, they feel, helps to point up their view that there is no connection between lung cancer and Tobacco, and that they are making a contribution in the broad public interest ... They believe their approach has had the effect of satisfying public opinion, and quieting public criticism”. The two industries agree on informal liaison ²¹ .
UK companies follow US lead. Whilst publicly offering money, they also cause doubt by shifting emphasis on how disease is caused	30 March: A “Statement issued by A Group of Leading Tobacco Manufacturers in the UK”, including BAT, Gallaher and Imperial, states: “There is no proof that smoking is a cause of lung cancer ... Until medical science discovers how the disease is caused, it is impossible to prove or disprove suggestions that smoking or anything else may contribute to it ... The tobacco manufacturers recognise the importance of accelerating medical research designed to ascertain the true causes of this disease. Accordingly they arranged in December last to make available over the next seven years a fund of £250,000 in aid of such research [to the MRC]” ²²

Stop business Tomorrow if harmful	31 March: George Weissman, Vice President of Philip Morris says the cigarette industry would “stop business tomorrow” if it believed smoking was harmful ²³ .
Evidence mounts in UK and USA	June: Cuyler Hammond from the American Cancer Society along with Daniel Horn publish an interim study on 187,766 men aged between 50-69, showing that 65 per cent more smokers than non-smokers had died in the 50-54 age range and 60 per cent greater in 55-59 and 102 per cent greater in 60-64 age range ²⁴ .
	26 June: The <i>British Medical Journal</i> publishes a study by Doll and Bradford Hill that had examined British doctors: of the 789 doctors who had dies, 35 had died of lung cancer, all of them smokers ²⁵ .
Industry denies link	13 October: Timothy Hartness, chairman of the TIRC, states: “no clinical evidence has yet established tobacco to be the cause of human cancer” ²⁶ .
	24 November: E. A. Darr, President of RJR, states “there still isn't a single shred of substantial evidence to link cigarette smoking and lung cancer directly” ²⁷ .
Industry researchers' say must look at problem	Dr. I. W. Tucker, first full-time director of B&W's Technical Research Department, says that “tobacco companies' research departments must now conduct work on smoke constituents not only for technological improvements but also for better understanding of their products as a result of the smoking and health controversy” ²⁸ .
Inform public of risks	1955
	March: CHSC advises the Minister for Health: “that it was desirable that appropriate action should be taken constantly to inform the public if the known connection between smoking and cancer of the lung and of the risks involved in heavy smoking.” ²⁹
TIRC Privately admits to research and PR	April: The Scientific Director of the US TIRC writes that “essentially the major purposes of the TIRC are Research and Public Relations. Our job is to maintain a balance between the two” ³⁰
Evidence mounts	1956:
	24 February: Dr. Ernest Wynder presents his latest study which shows that cigarette smoking is the “single most important external factor” associated with lung cancer ³¹ .
Publicly TIRC says job to find truth	March: Clarence Little, the Scientific Director of the US TIRC, writes in <i>Cancer Research</i> that its “one objective” is “namely to find the whole truth and see that it is made known as quickly and effectively as possible” ³²
No proof	9 March: John Partridge, the Secretary from Imperial Tobacco, writes to Sir John Hawton, Ministry of Health outlining the company's draft statement for its forthcoming AGM: “We would regard it an elementary duty and responsibility to leave nothing undone that we can do to secure the eradication of anything in tobacco which is found

	to be harmful to health ... I state that in our considered opinion there is no proof at all that smoking causes lung cancer and much to suggest that it cannot be the cause” ³³ .
Fudges the issue	26 March: The Imperial Tobacco Chairman’s statement to shareholders does not include the draft text, but says, in part: “Excessive smoking -like excessive eating or excessive drinking - cannot be good for anyone; but equally obviously what is excessive to one person may be harmless to another” ³⁴ .
UK Government accepts link	7 May: The Minister of Health, Mr. R. H. Turton, states in the House of Commons, that: “Two known cancer-causing agents have been identified in tobacco smoke, but whether they have a direct role in producing lung cancer, and if so what, has not been proved ..the fact that a causal relationship has not yet been recognised should not be allowed to obscure the fact that there is, statistically, an incontrovertible association between cigarette smoking and the incidence of lung cancer ... mortality from cancer from the lung is twenty times greater amongst heavy smokers than amongst non-smokers ³⁵ .”
UK companies deny and delay-more research	7 May: The leading UK companies once again make a statement on Smoking and Health: “The evidence on the possible relationship of lung cancer and smoking is conflicting and incomplete ... The industry has consistently favoured a scientific and objective approach to this question. Quite apart from our own chemical research into the constituents of tobacco and tobacco smoke we have assisted, and will continue to assist, research in every way we can; and we make this statement with a full sense of our duty to the public.” ³⁶
Internal research points to cancer	20 July: Philip Morris’ Research Director, Robert DuPuis, sends a memo, noting that in ventilated cigarettes there was a “proved decrease in carbon monoxide and carbon dioxide plus an increase in oxygen content of the smoke”. The former “was related to decreased harm to the circulatory system as a result of smoking”, whilst the later meant there was less chance of depriving cells of oxygen and hence “of starting a possible chain of events leading to the formation of a cancer cell” ³⁷ .
	August: The British Tobacco manufacturers announce the formation of the Tobacco Manufacturers’ Standing Committee (TMSC) ³⁸ .
Scientists admit there is a problem and that problem should be removed	Alan Rodgmen, a chemist for RJ Reynolds, writes a paper called “The Analysis of Cigarette Smoking Condensate” in which he states: “Since it now well established that cigarette smoke does contain several polycyclic aromatic hydrocarbons, and considering the potential and actual carcinogenic activity of a number of these compounds, a method of either complete removal or almost complete removal of these compounds from smoke is required.” ³⁹
	1957:

<p>Industry scientists start using code word for cancer – say there is a causal link</p>	<p>March: An internal BAT Memo describes work underway at BAT’s laboratories in Southampton, using code words for lung cancer “ZEPHYR” : “As a result of several statistical surveys, the idea has arisen that there is a causal relationship between ZEPHYR and tobacco smoking, particularly cigarette smoking. Various hypothesis have been propounded” one of which is that “tobacco smoke contains a substance or substances which may cause ZEPHYR”⁴⁰.</p>
<p>Government expects industry opposition</p>	<p>7 May: The Cabinet Committee on Cancer of the Lung reports that the “tobacco companies ...would be certain to embark on a powerful campaign of publicity in opposition to the Central Council For Health Education” [‘s publicity campaign on the link between smoking and cancer]⁴¹.</p>
<p>UK and US industry liaison</p>	<p>31 May: Tobacco Manufacturers’ Standing Committee (TMSC) reports that it has “established a close liaison with the Tobacco Industry Research Committee in the US”⁴².</p>
<p>UK Government accepts cause and effect relationship</p>	<p>27 June: The MRC publishes the results of five years research in its report “Tobacco Smoking and Cancer of the Lung”, stating that: “ A very great increase has occurred during the past 25 years in the death rate from lung cancer in Great Britain and other countries ...Evidence from many investigations in different countries indicates that a major part of it is associated with tobacco smoking, particularly in the form of cigarettes. In the opinion of Council, the most reasonable interpretation of this evidence is that the relationship is one of direct cause and effect. The identification of several carcinogenic substances in tobacco smoke provides a rational basis for such a causal relationship”. The Government accepted the MRC’s findings⁴³.</p>
<p>Industry denies it</p>	<p>The TMSC responds by saying that: “It has not been established with any certainty whether and to what extent there may be a causal relationship between smoking and cancer of the lung. At this stage any conclusions are a matter of opinion”⁴⁴.</p>
<p>US - Increasing evidence of cause and effect.</p>	<p>12 July: The US Public Health Service states that there is “increasing and consistent evidence that excessive cigarette smoking is one of the causative factors in lung cancer”⁴⁵.</p>
<p>Industry adds conflict</p>	<p>December: The TMSC issues a report “Smoking and Lung Cancer - The Conflict of Opinion” commenting that it illustrates “the conflict of opinion that exists about the factors that may be active in lung cancer.”⁴⁶</p>
<p>Industry scientists accept link</p>	<p>Paul Kotin, a pathologist from the University of California, who is on the TIRC’s Scientific Board, writes that the statement “to the effect that ‘ the sum total of scientific evidence establishes beyond reasonable doubt that cigarette smoke is a causal factor in the rapidly increasing incidence of human epidermoid cancer of the lung’, represents a view with which concur” .⁴⁷</p>

	<p>Sir Ronald Fisher, a consultant for the British Tobacco industry concedes that epidemiological evidence has established a real association between smoking and lung cancer.⁴⁸</p>
Industry increases PR efforts	<p>1958:</p> <p>The Tobacco Institute is formed in the US and takes over the industry's PR efforts.</p>
Real conflict inside industry	<p>23 April: A confidential Philip Morris memo states: "All of us, or at least most of us, in the tobacco industry are caught between a guilt complex and a power complex. The guilt complex is a simple matter. We tend to suffer from the <u>sternly repressed</u> fear that our opponents are right and we are wrong on the health question and that we are thus devoting our business lives to the propagation of lung cancer"⁴⁹.</p>
US / Canadian tobacco scientists agree cause and effect relationship	<p>May: D.G. Felton from BAT and two other leading British tobacco scientists visit officials and scientists from the U.S. and Canadian tobacco industries , including those at the TIRC, Liggett, Philip Morris and the American Tobacco Company. One object of the visit was to find out "the extent in which it is accepted that cigarette smoke 'causes' lung cancer". The scientists note: "With one exception (H.S.N. Greene) [not formally affiliated with any tobacco company] the individuals with whom we met believed that smoking causes lung cancer if by 'causation'; we mean any chain of events which leads finally to lung cancer and which involves smoking as an indispensable link ...we found general acceptance of the view that the most likely means of causation is that tobacco smoke contains carcinogenic substances present in sufficient quantity to provide lung cancer."</p> <p>The scientists conclude " Although there remains some doubt as to the proportion of the total lung cancer mortality which can be fairly attributed to smoking, scientific opinion in the U.S.A. does not now seriously doubt that the statistical correlation is real and reflects a cause and effect relationship."⁵⁰</p>
Industry privately admits that TIRC is a con	<p>The British scientists also observe that: "Liggett & Meyers stayed out of T.I.R.C. originally because they doubted the sincerity of T.I.R.C.'s motives and believed that the organisation was too unwieldy to work efficiently. They remain convinced that their misgivings were justified. In their opinion T.I.R.C. has done little if anything constructive, the constantly reiterated 'not proven' statements in the face of mounting contrary evidence has thoroughly discredited T.I.R.C., and the S.A.B. of T.I.R.C. is supporting almost without exception projects that are not related directly to smoking and lung cancer"⁵¹.</p>
Research scientists see	<p>24 July: Dr. C Mace, a scientist at Philip Morris writes to his head of Research "Evidence is building up that heavy smoking contributes to lung cancer". Mace then writes of the benefits for the company if they had the "intestinal fortitude to jump on the other side of the</p>

benefits in admitting harmful product.	fence” admitting that cigarettes are hazardous. “Just look what a wealth of ammunition would be at his disposal” to attack the other companies who did not have safe cigarettes. “We would have to be careful to infer that the reason for the change in dress was the continuing evidence link cigarette smoking with health (problems) and the although the evidence is not altogether irrefutable, we have decided upon this course if action in the public interest” ⁵² .
Canadian industry accepts statistical evidence	13 August: In Canada Rothmans takes out a full page advert in the <i>Toronto Daily Star</i> stating: “Rothmans Research Division accepts the <i>statistical</i> evidence linking lung cancer with heavy smoking. This is done as a precautionary measure in the interest of smokers. The exact <i>biological</i> relationship between smoking and cancer in mankind is still not known and a direct link has not been proved ... Rothmans Research Division welcomes this opportunity to reiterate its pledge to continue its policy of all-out research, to impart vital information as soon as possible, and to give smokers of Rothmans cigarettes improvements as soon as they are developed. In conclusion, as with all good things of modern living, Rothmans believes that with moderation smoking can remain one of life’s simple and safe pleasures.” ⁵³
Publicly we are doing all we can	1959: February: Imperial Tobacco sends a booklet “Research + Control = Quality” to all its shareholders, employees and customers in the UK. “We have also devoted great efforts in recent years to research in to the alleged effects of smoking upon health”, says the booklet ⁵⁴ .
More PR needed to counter claims	July: PR company Hill and Knowlton writes a memo to RJ Reynold’s new CEO, also serving as the head of the newly formed Tobacco Institute. The memo outlines the need for intensified measures “to cope with attacks based on ‘scare’ charges”, arguing the need to reaffirm “through all means possible the position that the role of tobacco in health and particularly lung cancer is not proved and that evidence mounts to dispute the broad charges against tobacco ... The health of the nation is constantly improving, along with the increased use of tobacco” ⁵⁵ .
Distinct possibility smoke carcinogenic	An RJR scientist, Alan Rodgman, concludes that there is a “distinct possibility” that substances in cigarette smoke could have a carcinogenic effect” ⁵⁶ .

1960s

<p>After a decade of increasing evidence, industry carries on the denial and maintains causation unproved</p>	<p>1960:</p> <p>21 April: RJ Reynolds Chairman Bowman Gray says of the relationship between smoking and cancer: “I just don’t believe it. People are hearing the same old story, and the record is getting scratched”⁵⁷.</p> <p>In the US, the TIRC’s Scientific Advisory Board issue a report: “Causation Theory of Smoking Unproved” alleging that: “The continued failure of evidence which is qualitatively different or of increased significance to appear leaves the causation theory of smoking in lung cancer, heart disease and other ailments without clinical and experimental proof”⁵⁸.</p>
<p>Industry research confirms carcinogenic nature of smoke</p>	<p>March: Dr. Bentley, from Imperial’s Research Department writes about research on Smoking and Lung Cancer by the Tobacco Manufacturers’ Standing Committee: “It was about this time, namely 7 years ago, that attention was first drawn to the fact that tobacco smoke contains very small amounts of carcinogenic polynuclear aromatic hydrocarbons of which 3:4 benzopyrene was the one of most immediate topical interest. It was therefore logical for the tobacco manufacturers’ research departments to take an interest in benzopyrene in tobacco smoke not because it followed that this compound was necessarily responsible for causing cancer of the lung, because in fact subsequent evidence makes it most unlikely that this could be so, but because benzopyrene provided a particularly suitable indicator substance for work on chemical carcinogens in tobacco smoke ... The general conclusion of all this work were that if it was thought likely that benzopyrene in cigarette smoke was the cause of human lung cancer then a means could almost certainly be found to eliminate it from smoke”.</p> <p>“TMSC has been concerned in three major collaborative experiments in the last 3 or 4 years ...Professor Blacklock ... has found that cigarette smoke condensate, in large quantities, is capable if it enters a bronchus of causing hyperplasia and squamous mataplasia and isolated instances bronchial carcinoma ...Dr Day ..has confirmed that this material [cigarette smoke condensate neutral fraction] is in fact capable of producing pailomata and carconomata of the mouse skin ...Tobacco smoke condensate is by any standard generally agreed to be a very feeble carcinogen.⁵⁹”</p>
<p>Industry consultants admit cigarette smoking is cancer causing</p>	<p>15 March: A Confidential memo from consulting firm Arthur. D. Little, working for the US Liggett, reviews the results of seven year’s research work; “There are biologically active materials present in cigarette smoking. These are a) cancer causing b) cancer promoting c) poisonous d) stimulating pleasurable and flavourful”⁶⁰</p>

and promoting	
Industry research finds 42 carcinogens in cigarette smoke	<p>15 November: Helmut Wakeham, Philip Morris, Head of Research and Development writes a memo on Tobacco and Health: “Evidence linking Cancer and Tobacco: Based on two main points:</p> <ol style="list-style-type: none"> 1) Statistical evidence that certain diseases are more prevalent among smokers than non-smokers. Lung-cancer; Bladder cancer; Cardiovascular disease. These associations suggest that smoking may be a causative factor. 2) Physiological tests in which animals treated with smoke condensates, extracts, or compounds therefrom, suffer from increased tumour frequency”. <p>Wakeham lists 42 compounds in cigarette smoke, identified as carcinogens.⁶¹.</p>
Top industry scientist quits as industry refuses to accept causation. Re-employed on condition it no longer denies causation	<p>Early 1960’s : Todd has dinner with Doll who recalls: “Mr. Todd invited my wife and myself to dine with him, whilst he was still employed by the industry, as he had resigned because the industry would not accept his advice that a causal connection between smoking and lung cancer had been proved. A few days later he phoned to say that he had accepted re-employment on the understanding that the industry would not publicly deny the causal relationship.⁶²”</p>
1 st landmark report into smoking by RCP – cigarettes cause cancer	<p>1962:</p> <p>7 March: The Royal College of Physicians issues the first major report on “Smoking and Health”, which concludes: “Cigarette smoking is a cause of lung cancer and bronchitis ... cigarette smoking is the most likely cause of the recent world-wide increase in deaths from lung cancer, the death rate from which is at present higher in Britain than in any other country in the world; that it is an important predisposing cause of the development of chronic bronchitis ...Cigarette smoking probably increases the risk of dying from coronary heart disease, particularly in early middle age⁶³ .</p>
Industry attempts to discredit RCP Its business as usual - we won't even stop	<p>12 March: John Partridge, the Chairman of the Tobacco Manufacturers Standing Committee, and Deputy Chairman for Imperial, appears on the BBC’s <i>Panorama</i> Programme. Calling the RCP report an “unbalanced picture”, Partridge does not “accept the sweeping assertions in the [RCP] report, incriminating smoking ...I do not believe that you will stop the people of this country from smoking ...they know the odds are heavily against their coming to any real harm from it”.</p> <p>On the programme, Partridge is asked “would you agree that we must stop young people smoking?” To which he replies “No, I would not” He later says “We are prepared to go on advertising our</p>

young people smoking	products”, to which he is asked “To young people? and he replies “Yes indeed ... but not to children ... I happen to think that neither tobacco, nor alcohol are harmful, in moderation ⁶⁴ .”
Its old news even if we don't know what's in smoke	7 March: The Tobacco Advisory Committee responds to the RCP by stating that “all the scientific evidence in the report is well known to the industry” and “ the harmful constituents of smoke, if any, are not known ⁶⁵ ”.
Premature to draw link to cancer – although we don't deny it	March: G.F. Todd responds in detail to the RCP on behalf of the TMSC, saying that: “ it seems premature therefore to draw conclusions about the relative contributions of either smoking or air pollution to lung cancer”. His remarks are seen as “clever” although “there is no denial of the almost certain relationship between smoking and cancer of the lung although all possible is done to confuse the issue” ⁶⁶ .
New Research Director tells BAT to accept causation	Dr Jim Green joins BAT as Director of Research immediately after the RCP report. He suggests that the company should “adopt the attitude that the causal link between smoking and lung cancer was proven – because we could not be any worse off [in denial of the link]” ⁶⁷ .
Our public denial has nothing to do with the fact that we make cigarettes	20 March: R W S Clark, Chairman of Imperial Tobacco Company addresses the AGM: “.. It has been said or implied in a number of quarters that the position taken up by the manufacturers is heavily biased by the fact our commercial interests are involved. I want to say quite categorically that any such imputation is completely unjustified and unfair. It is, of course, self-evident that the industry's commercial interests are involved, but the tobacco manufacturers also fully recognise their responsibility to the public ...a general condemnation of cigarette smoking is neither justified nor constructive ⁶⁸ ”.
Do not deny association of lung cancer – still deny causation	21 March: A Memo of a meeting between Government Civil Servants and John Partridge, Deputy Chairman of Imperial and C.F. Todd representing the Tobacco Manufacturers' Standing Committee, shows that Partridge and Imperial “did not dispute the association of lung-cancer with smoking; they did deny the proof of any causal connection ⁶⁹ ”.
Lets keep things in perspective - Overindulgence in anything is bad for you	5 April: Carreras Rothmans respond to the RCP report in a letter to the President of the Board of Trade: “We believe it is particularly important that the subject of health and smoking should be kept in perspective and considered positively and constructively. We must all, surely, accept that over indulgence in any pleasure could always be harmful: moderation in all things is a good maxim”.
No effort will be spared to remove harmful elements	“Inevitably most smokers wish to continue a custom from which they derive considerable enjoyment and it is only fair to assume that their reaction is to require assurance from the Government and the Tobacco industry that no effort will be spared to find out what if

	any, are the harmful elements in cigarette smoke and if they do exist, that action will be taken regarding their removal” ⁷⁰ .
<p>We dread the word cancer</p> <p>But we recognise smokers cough</p> <p>We also know that tobacco condensate is carcinogenic</p>	<p>July: Sir Charles Ellis, from BAT R&D Department addresses the Annual BAT research conference, downplaying the RCP report : “..We who have been immersed in the subject for many years know that this report produced no new fact, produced no new arguments, indeed, except for the contribution of an emotional gloss, left the subject untouched. We know only too well that there are no conclusive proofs; that there are few, if any, cold scientific facts. However emotional conclusions cannot be disregarded ...The most important is the dread word ‘cancer’ ...smoker’s cough is a real phenomenon and obvious to everyone, and we should recognise that it is a factor in the emotional build-up”.</p> <p>“.. The Board recognises that this problem must be tackled from two sides, the first being medical research on the origin of lung cancer and bio-assay on the biological effects of smoke, and the second being the composition of smoke and the possibilities of modifying it ... the central fact in this subject is that in sufficient doses tobacco condensate acts as a carcinogen when painted on to the backs of mice, or when injected subcutaneously into rats.”⁷¹</p>
Joint research facilities open	September: The TMSC opens chemical and biological laboratories at Harrogate..
Causes unknown	The Tobacco Institute issue a press release stating that: “The causes of cancer are not now known to science. Many factors are being studied along with tobacco. The case against tobacco is based largely on statistical associations, the meanings of which are in dispute” ⁷² .
RCP disservice to scientific research	The TIRC’s Annual Report for 1962 states that the RCP report “contains no new or original data but amounts to a statement of opinion, is a disservice to scientific research” ⁷³ .
<p>Company scientists say Smoking increases risk of lung cancer</p> <p>Worried that company denies in public, what it knows in</p>	<p>Alan Rodgman, a research chemist with RJ Reynolds writes his company’s sixth report on “The Smoking and Health Problem”: “It has been shown in thirty retrospective and in four prospective statistical studies that the incidence of lung cancer is low in non-smokers, proportional to cigarette consumption, greater in cigarette smokers than in cigar or in pipe smokers, greater in cigarette smokers who inhale than in those who do not inhale, greater in cigarette smokers continuing the habit than in ex-smokers ... These findings indicate that cigarette smoking increases the risk of developing lung cancer. Many authorities believe the relationship to be one of cause-and-effect.</p> <p>Rodgman is worried that the company is publicly denying a link between smoking and cancer in public, whilst the company’s own research shows there is a link. “What would be the effect on this company of not publishing these data now, but being required at</p>

private – scientists are concerned and want to find solution	some future data to disclose such data, possibly in the unfavourable atmosphere of a lawsuit? ...It is recommended that the Company’s management recognise that many members of its Research Department are intensely concerned about the cigarette smoke-health problem and eager to participate in its study and solution. ⁷⁴ ”
Name change	1963: January: The TMSC becomes the Tobacco Research Council.
Confuse	February: The US TIRC’s President writes that: “Our scientific advisers tell us that the causes of lung cancer are still not known and that, as a matter of fact, recent research has tended to point up many new possible causes.” ⁷⁵
Accept causal link between smoking and lung cancer – but we won’t submit report	1 April: In the US, Liggett hires Arthur D. Little to write a report to submit to the Surgeon General. The company concludes: “we accept the inference of a causal relationship between chemical properties of ingested tobacco smoke and the development of carcinoma ... all types of smoking are associated with increased mortality from all causes combined”. Cigarettes caused increased death “for coronary artery diseases, for all carcinoma combined, for lung cancer, for genito-urinary system cancers and for cancers of the buccal cavity [mouth and throat]”. The report was never submitted ⁷⁶ .
Panic – we are in a grave crisis	18 June: The US tobacco industry is in a state of panic over the forthcoming Surgeon General’s report: The Director of Public Relations at B&W writes: “The consensus is that the industry is in a ‘grave crisis’ and the philosophy is ‘to expect the worst and work for the best’” ⁷⁷ .
Lawyers warn that cigarette smoking important in causing lung cancer - maybe need warning on packets	17 July: Addison Yeaman, Vice President and General Counsel of B&W is also worried about the Surgeon-General’s report: “Certainly one would hope to prove there is no etiological [cause of disease] factor on smoke but the odds are greatly against success in that field. At the best, the probabilities are that some combination of constituents of smoke will be found conducive to the onset of cancer or to create an environment in which cancer is more likely to occur ...I have no wish to be tarred and feathered, but I would suggest the industry might serve itself on several fronts if it voluntarily adopted a package legend such as ‘excessive use of this product may be injurious to health of susceptible persons’ ...This is so controversial a suggestion - indeed shocking- that I would rather not try to anticipate the arguments against it in this note but reserve my defence” ⁷⁸ .
Public statement of bravado	September: <i>Business Week</i> quotes an unnamed source in Philip Morris who says: “If they tell us tomorrow that a cancer-causing element has been identified in tobacco smoke, we could remove it the day after” ⁷⁹ .
	24 October: Helmut Wakeham from Philip Morris writes a “technical

<p>Meanwhile privately its not just lung cancer we are worried about – its bronchitis and emphysema and cardiovascular problems too</p> <p>It will be hard to contest carcinogenic nature of smoke</p>	<p>forecast outlining those areas where the cigarette industry might be most subject to criticism and suggesting those elements in smoke which might be most accused by either the medical profession or exploited by our competitors”. He outlines that “We believe that the health critics are following three main lines of attack:</p> <ol style="list-style-type: none"> 1) Chemical carcinogenesis of the lungs by smoke constituents; 2) Irritation from smoke components leading to chronic bronchitis and emphysema; and 3) Cardiovascular effects due mainly to nicotine in the smoke.” <p>..We believe that the next medical attack on cigarettes will be based on the cocarcinogen idea. With the hundreds of compounds in smoke, this hypothesis will be hard to contest ...Irritation problems are now receiving greater attention because of the general medical belief that irritation leads to chronic bronchitis and emphysema. These are serious diseases involving millions of people ... A number of experts have predicted that he cigarette industry ultimately may be in greater trouble in this area than in the lung cancer field ...The cardiovascular effects in smoke are believed to be mainly due to nicotine ... if forced to, we could produce a fairly tasty low nicotine product.^{80,}</p>
<p>Cigarettes will be exonerated – they are not a health hazard</p>	<p>29 November: President of Philip Morris, Joseph Cullman, says: “While I do not minimise the health problem, I think that eventually cigarettes will be exonerated ...I don’t think the present product will prove to be a major health hazard. I also believe that changes can be made in the product if they are indicated⁸¹.”</p>
<p>What good has TIRC served, despite the millions spent?</p>	<p>Frederick Darkis, Research Chief at Liggett and Myers in the US, calls the TIRC “mostly a publicity organisation. They have given millions to various research analysts, but it is very difficult to know what purpose the money has served.^{82,}</p>
<p>1st landmark study by the Surgeon – General. Cigarette smoking is causally related to lung cancer</p>	<p>1964:</p> <p>11 January: First Report of the US Surgeon-General, “Smoking and Health”, concludes: “Cigarette smoking is causally related to lung cancer in men; the magnitude of the effect of cigarette smoking far outweighs all other factors. The data for women, though less extensive point in the same direction ... Cigarette smoking is much more important than occupational exposures in the causation of lung cancer of the general population ... Cigarette smoking is the most important of the causes of chronic bronchitis in the US, and increases the risk of dying from chronic bronchitis and emphysema ...Cigarette smoking is a health hazard of sufficient importance in the US to warrant appropriate remedial action”⁸³.</p>
<p>Nothing harmful in tobacco</p>	<p>In response to the Surgeon General, Howard Cullman, a Board member of Philip Morris states: “We don’t accept the idea that there are harmful agents in tobacco”⁸⁴.</p>

<p>Opportunity to benefit commercially by modifying product as little basis for disputing charges. We could be negligent if we don't ..</p>	<p>18 February: Helmut Wakeham, Vice President for Research and Development at Philip Morris responds to the Surgeon General's report by stating that: "The onus of proof has been moved by the report from its usual position with the industry's accusers to the tobacco industry itself. Meeting this challenge affords Philip Morris a splendid opportunity to gain a competitive edge through effective technical activity. Positive programmes to cure ills cited in this report, whether real or alleged, are recommended as little basis for disputing the findings at this time has appeared .. the hoped-for results of these efforts will be cigarettes with distinguishing new product properties which are biologically approved on all major health questions. Such products should be advertised vigorously on the basis of studies so conducted ...failure to do such research could give rise to negligence charges"⁸⁵.</p>
<p>Evidence mounts</p>	<p>26 February: An internal BAT document states that "epidemiological evidence showed clearly that cigarette smoke caused lung cancer"⁸⁶.</p>
<p>I'm not qualified. I'm just human.</p>	<p>June: Appearing before the Congressional Committee on Interstate and Foreign Commerce, the head of RJ Reynolds, Bowman Gray, declares: "The tobacco industry is profoundly conscious of the gravity of questions concerning smoking and health ... I am neither a doctor or scientist, and I am, therefore, not qualified to participate in a debate on the medical or scientific questions relating to tobacco and health ...If it is proven that cigarettes are harmful, we want to do something about it regardless of what somebody else tells us to do. And we would do our level best. This is just being human"⁸⁷.</p>
<p>Due to threat of litigation, situation being run by lawyers and no health research being done in US</p> <p>Not looking to</p>	<p>October: Philip Rogers and Geoffrey Todd visit the US on behalf of the Tobacco Research Council. Their report states "The main power on the smoking and health situation undoubtedly rest with the lawyers .. Smoking and health research by U.S. manufacturers is largely conditioned by two factors:</p> <ol style="list-style-type: none"> 1. The personal beliefs of the Presidents that nothing against smoking has been proved.... 2. The dilemma posed by the law suits. The manufacturers have to choose between (a) Doing no smoking and health research and being represented in law suits as negligent (although "to meet public concern" they finance C.T.R. and AMA research). (b) Doing smoking and health research and being forced to admit in law suits that their experiments have caused cancer in animals and yet that they have made no changes in tobacco smoke to eliminate the tumours". The manufactures have chosen (a)" <p>" ...the U.S. cigarette manufacturers are not looking for means to reduce the long term activity of cigarettes ... There is a general feeling that the policy since the S G A C [Surgeon-General's] report of</p>

solve problem	NOT making public statements, unless these are really necessary, has proved much more satisfactory than the previous policy” ⁸⁸ .
Informal agreement not to make health claims	Rogers and Todd also outline how the “informal agreement between TRC members not to make health claims was explained to Philip Morris. Mr. Weissman said that he was not prepared to bind himself and had to reserve freedom of action as there was no definition of what constituted a ‘health claim’ Assuming a reasonable definition of health claims, he would subscribe to the spirit of not making health claims in the U.K.” ⁸⁹ .
Privately admit cancer link, but we don’t know what causes it.	1965: September: Internal documents from BAT ‘s Research and Development Establishment outline the objectives to research: “These stem from the simple commercial one of selling more tobacco products; because of the present connection between smoking and cancer (accepted in this essay as valid), research objectives fall into two groups, the first connected with health, the second with quality and costs ... Is the effect of smoke, either as a source of pleasure or of cancer, attributable to a few, or to all, of its constituents, or to physical features in of the aerosol?” ⁹⁰ .
Americans are worried about UK research as its shows causal link.	October: An internal B&W memo sent to the company’s president, Mr. Finch, outlines a meeting with Mr. Hardy, one of the industry lawyers after he had returned from a trip to England. The memo outlines concerns about the UK industry research centre at Harrogate: “Harrogate has been very active in testing biological activity of smoke condensate on the shaven backs of mice. I understand them to be very active in fractionating smoke, developing ‘instant’ condensate, and in determining the relative biologic activity of individual elements of smoke. Substantially, all Harrogate has accomplished up to now is validation of the work of Wynder et al in the general area of biological activity of smoke condensate. Publication of this material, while adding nothing new of a damning nature, would have the effect of dignifying and confirming the significance of the Wynder-type work. Certainly it will renew interest in this phase of the cigarette/ health problem”. “I think it fair to say that the Harrogate work (1) accepts, at least as a basis for going forward, the existing epidemiological evidence of a causal connection between smoking and health, (2) accepts, for the purpose of going forward, the significance of biological activity on the skins of mice and (3) more disturbingly may be creating a situation in which unwarranted or undue significance might become attached to the relative biological activity of a particular constituent or constituents produced by pyrolysis of tobacco. The American

	<p>tobacco industry is deeply concerned with the matter of Harrogate’s approach and its research programmes, and more importantly, troubled by the publication of Harrogate results”. The memo also expresses concern that Geoffrey Todd, Executive Director of the TRC “has in the past given explicit indication of the existence of the causal relationship between smoking and health”⁹¹.</p>
Smoke is carcinogenic and should reduce problem	<p>Dr. R. B. Griffith, Head of R&D at B&W: “Scientists with whom I talked [at BAT’s laboratories in the UK] were unanimous in their opinion that smoke is weakly carcinogenic under certain conditions and that efforts should be made to reduce this activity”⁹².</p>
Health warnings	<p>Health Warnings are put on cigarette packets in America: “Caution: Cigarette smoking may be hazardous to your health”⁹³.</p>
Can’t research anything as it could be construed as libellous	<p>In the US, an attorney for American Tobacco, Janet Brown, writes that: “The law imposes on a manufacturer the duty to know what can be known about its product ... the question will be raised, for jury resolution, whether a reasonably prudent manufacturer capable of conducting biological research would not have instituted biological testing programs in the 1920s, 1930s or 1940s, eras in which ... red flags of warning respecting serious health questions were being raised in the scientific literature ... Instituting a biological program today will be argued to be an implied admission that the company believes it has not in the past been doing all it could and should have been doing to find the scientific facts respecting tobacco use and health”⁹⁴.</p>
Tobacco industry consultants say people should not smoke	<p>~1965: A “strictly confidential” report by two scientists Francis Roe, an independent tobacco consultant, and M C Pike, which is undated but uses references up to 1965, states: “There is a definitive and undeniable positive association between tobacco smoking, especially of cigarettes, and lung cancer ... <u>from the point of view of present day public health there can be no question that people should be encouraged not to smoke</u> ...the individual smoker’s death-rate from lung cancer is almost exactly directly proportional to his daily consumption ...if the immediate complete discontinuation of smoking were feasible for all smokers, then the recommendation that this be done need have been our only conclusion, since it is clear that every form of smoking increases the risk of lung cancer”⁹⁵.</p>
US wants to “slant” UK research	<p>1966:</p> <p>28 February: A letter from B&W to BAT expresses concern at the bioassay research being undertaken at Harrogate and its forthcoming report: “We are troubled lest that approach be taken to concede a significant causal relation between the use of tobacco and cancer of the lung. To reassure you, I have no intention of agitating the question, but the difference existing, we would hope to be afforded the opportunity of consulting with the people on your side concerning the way Harrogate’s work is presented, admittedly with</p>

	the hope of ‘ slanting ’ the report” [emphasis added] ⁹⁶ .
Internal evidence mounts	April: A Report undertaken by the Research Services Psychology Unit for the Tobacco Intelligence Department at Imperial states: “The statistical association between cigarette smoking and certain mortalities has now been observed repeatedly, in a number of different countries and by different observers. The statistical association with lung cancer, or at any rate with certain types of lung cancer, is particularly close ⁹⁷ .”
Internal evidence mounts – need a safer smoke	28 July: A BAT report outlines the reason for “Project Ariel”. “Evidence was, and is, available which suggests that normal cigarette smoke is tumorigenic and biologically irritating, and that these actions may be due to various chemical components arising from the pyrolysis of tobacco. Thus any device which eliminates these provides a safer smoke” ⁹⁸ .
Internal evidence mounts	25 October: A Philip Morris memo, entitled “Project 6900”, highlights how “The objective of Project 6900 is to advise Philip Morris in biology as related to smoking and smoking products”. Under “Long term Inhalation Studies” it states that “Available information from these studies indicates that gross lung pathology can be induced by smoking cigarettes” ⁹⁹ .
But we will use anything to deny it	A book written by a smoker, Harcourt Kitchin, called <i>You May Smoke</i> is published in the UK. Carreras buys 7,000 copies. Kitchin is subsequently approached by the Tiderock Corporation, a PR firm working for B&W in the US, asking him to publish in the US, and to debunk the Surgeon General’s report ¹⁰⁰ .
Covert research to assist litigation	In the US, the Council for Tobacco Research in the US, starts funding “special projects”, awarded by tobacco industry lawyers to “produce research that could be used to defend the industry in court” ¹⁰¹ .
US Lawyers don’t like the UK research	1967: 8 March: A meeting takes place between American and British tobacco lawyers in New York. One of the American lawyers “immediately stated in the strongest possible terms that TRC [Tobacco Research Council] had been unwise to carry out any biological research at all, that we were being very foolish in reporting it, and although scientifically we had discovered nothing new, we were likely to embarrass the United States’ industry severely by the course which we were following”.
We need a warning on the packet to get us off the hook	... “The American position is as follows. The causation theory remains an unproved hypothesis and there is no further scientific data to confirm it ...to avoid legal liability of one sort or another, there is a strong argument in favour of a general cautionary statement on cigarette packets such as now adopted in the USA. The position

<p>UK authorities convinced causation valid – we need to reduce tar to avoid being sued</p>	<p>on the packet or advertising of ‘tar’ and nicotine figures such as in the case of ‘Carlton’ or ‘True’ represents simply an approach to a marketing situation which is (as far as the manufacturers are concerned) unconnected with health ...</p> <p>Representatives from the United Kingdom made the following points ... The medical profession in the United Kingdom is unanimously convinced that the causative hypothesis is valid and this is taken for granted in regard to their attitude to smoking ... The legal advice which we had received had made it clear that the UK industry would be subject to an increasing risk of law suits if steps were not taken to make the public aware of the ‘tar’ content of cigarette brands ... The Americans misunderstood the position if they believed that a political pressure group to push the irrelevance of the health issue in regard to smoking would find much favour in the UK”¹⁰².</p>
<p>Stuck in a paradox</p>	<p>20 June: G.F. Todd of the Tobacco Research Council, writes a letter to Mr. Addison Yeaman, Vice President and General Counsel of Brown & Williamson: “The only real difficulties that we encountered arose out of the unavoidable paradox at the centre of our operations - namely that, on the one hand the manufacturers control TRC's operations and do not accept that smoking has been proved to cause lung cancer while, on the other hand, TRC's research program is based on the working hypothesis that this has been sufficiently proved for research purposes. In addition, the Council senior scientists accept that causation theory . . . We have not yet found the best way of handling this paradox” .¹⁰³</p>
<p>Lets confuse the issue</p>	<p>3 October: The TIRC publishes “What are the Facts”, stating that the “Tobacco industry has a special responsibility to help find the true facts about tobacco and health”. It asks the question “Is there ‘Mounting Evidence’ to Link Cigarette Smoking with Lung Cancer?: “The ‘evidence’ is not medical in the usual sense, because clinical and experimental research does not bear out the anti-cigarette theory. There is no scientific cause-and-effect proof. Only statistical studies provide the ‘evidence’”¹⁰⁴</p>
<p>Lets confuse the issue again</p>	<p>3 October: B&W issues an employee booklet, entitled “Smoking and Health”, where the company gives answers to certain questions regarding health:</p> <p>“ASSERTION: People who smoke are select prospects for cancer and other diseases, FACT: People who do not smoke suffer from all the diseases that have been selectively linked with smoking. ASSERTION: 300,000 adult smokers die prematurely each year because of cigarette smoking; FACT: No one can accurately make that statement, because there is no valid supporting evidence”¹⁰⁵</p>

Lets ignore all the evidence	3 October: Paul Smith, Vice President of Philip Morris attacks “the Public Health service forces” who are “frustrated by ‘an extreme shortage of evidence necessary to nail down the indictment against smoking and a slowly accumulating body of evidence which is beginning to weaken their major statistical case ... Nobody has yet been able to find any ingredient as found in tobacco or smoke that causes human disease ¹⁰⁶ ”.
No inhaling: no lung cancer . Health issue isn’t going away	24 October: BAT’s Annual Research Conference is held in Montreal. Draft minutes show: “If there is no inhaling, there is no lung cancer or respiratory disease ... It was agreed that smoking is likely to be associated with health continuously in the future and that it will not be a passing phase.” ¹⁰⁷ .
So far we have responded with a PR, not scientific campaign	9 November: W. Bates from the Tobacco Institute writes that “in my opinion the tobacco industry has a very serious problem in the current tobacco- health controversy and it is rapidly becoming worse ...In the last fourteen years this problem has become more complex, more involved and much more serious. Although this problem has public relations, business, legal and political components, it is basically a scientific one. So far, however, the major efforts of the industry to cope with this problem have been other than scientific”. ¹⁰⁸
And lets carry on that way	1968: January: An article “To Smoke or Not to Smoke” appears in <i>True Magazine</i> by journalist Stanley Frank who concludes “the hazards of cigarette smoking may not be so real as we have been led to believe”. An internal B&W memo shows that “We will receive a copy of the outline. If it is unfavourable, we can exert sufficient influence to change the ‘tone’ before the final article ... We are assured by Joe that Frank has the desired point of view ..we will pay Frank \$500.00 for his time and expenses in preparing the article”. The Tobacco industry circulated 600,000 copies of the article ¹⁰⁹ .
Research the disease not tobacco as it’s a good smoke-screen	19 January: A B&W document states that “Janet Brown [an attorney with American Brands]” gave a “ well reasoned argument in defence of the long established policy of CTR [Council for Tobacco Research], carried out through SAB to ‘research the disease’ as opposed to researching questions more directly related to tobacco .. the argument seems to be that by operating primarily in the field of research of the disease we do at least two useful things: First, we maintain the position that the existing evidence of a relationship between the use of tobacco and health is inadequate to justify research more closely related to tobacco, and Secondly, that the study of the disease keeps constantly alive

	<p>the argument that, until basic knowledge of the disease itself is further advanced, it is scientifically inappropriate to devote the major effort to tobacco”¹¹⁰.</p>
<p>UK company reduces tar on health grounds</p>	<p>20 February: In a Supplementary Memorandum to the Ministry of Health, Imperial comments on the Publication of Cigarette Smoke Composition Data. “Taken together”, says Imperial, “the RCP recommendations [from 1962 report] and our experimental results - which established the significance of ‘tar’ for mouse skin cancer beyond reasonable doubt - have obliged Imperial to assume that there are now sufficient grounds to justify ‘tar’ reduction in our brands; Gallaher and Carreras have confirmed their agreement with this view in their submissions to the Minister. Accordingly, each of us has reduced the ‘tar’ delivery of important filter cigarette brands during the last eighteen months ... It is not technically difficult to reduce ‘tar’ yield of a filter cigarette ... Imperial has therefore not felt obliged to assume that there was a case on health grounds for reducing nicotine pro rate with ‘tar’¹¹¹”.</p>
<p>The more research the more we ignore it.</p>	<p>April: Philip Morris’ new President George Weissman: “No clear-cut case against cigarette smoking has ever been made despite millions spent on research ... The longer these tests go on, the better our [the industry’s] case becomes”¹¹².</p>
<p>Yet publicly we say we have led way</p>	<p>17 August: The Tobacco Institute attacks the Surgeon General’s task force for a “shockingly intemperate defamation of an industry which has led the way in medical research to seek answers in the cigarette controversy”¹¹³.</p>
<p>What we want is: Controversy Contradiction</p>	<p>18 October: Carl Thompson from Hill and Knowlton writes a letter to the Tobacco Institute’s new head of PR, William Kloepfer, on the best angles for the industry magazine, Tobacco and Health Research: “The most important type of story is that which casts doubt in the cause and effect theory of disease and smoking”. Eye-grabbing headlines were needed and “should strongly call out the point – Controversy! Contradiction ! other Factors! Unknowns!”¹¹⁴.</p>
<p>Mouse House research finds emphysema</p>	<p>A research report is written by the Director of RJ Reynolds Biological Testing Laboratory, known as the “Mouse House” to the Murray Senkus, Reynolds’ Research Director, regarding “Smoking Rats”: “The chronic exposure of rats to smoke is continuing. The number of exposures was increased to two a day on July 16, 1968. Three rats were lost after bleeding tissues were taken for histology.</p> <p>No gross pathology was noted. The histology of the tissues from the rat which had smoked TEMPO cigarettes via an indwelling tracheal cannula has been completed with the results given on the following page. A diffuse, marked emphysema throughout the lungs”¹¹⁵.</p>
	<p>Philip Morris Vice President Helmut Wakeham, writes about a ‘gentleman’s agreement’ under which the companies had agreed to</p>

Gentleman's agreement not to do research	refrain from conducting in-house biological experiments on tobacco smoke: "We have reason to believe that in spite of gentlemen [sic] agreement from the tobacco industry in previous years that at least some of the major companies have been increasing biological studies within their own facilities ¹¹⁶ ."
Industry agree to no longer deny disease	1968/69: Dr. Doll recalls a meeting that took place between the RCP and Imperial, at "which the industry representatives agreed that they would no longer deny that tobacco caused disease, but they would continue to sell their product on the ground that people enjoyed it ¹¹⁷ ".
100,000 die in UK from smoking	1969: The Chief Medical Officer advises that because of cigarette smoking "some 80,000 premature deaths probably occur in England and Wales each year and for the whole of the United Kingdom the number must approach 100,000 ¹¹⁸ ".
Smoking whilst pregnant is bad for you	10 January: An internal Philip Morris memo is written by Helmut Wakeham: "Now we have a study of the effect of smoking in pregnancy which supports previous conclusions that smoking mothers produce smaller babies. The position of the medical people is that smaller babies have detrimental effects all through life ¹¹⁹ ."
No causal relationship	3 February: Council for Tobacco Research in the US: "There is no demonstrated causal relationship between smoking and any disease ... the whole field of smoking and health requires a great deal more research and information before a proper evaluation can be made" ¹²⁰ .
Public fudge	April: Joseph Cullman, CEO and Chairman of the Board of Philip Morris: "Its a hazardous world we live in - and cigarettes are far down the list of hazards" ¹²¹ .
Privately we worry about lung cancer, bronchitis and emphysema	2-6 June: The Annual BAT research conference ends with the conclusion that: "At the present time the industry has to recognise the possibility of distinct adverse health reactions to smoke aerosol: (a) lung cancer (b) emphysema and bronchitis." ¹²²
Carrots are harmful to health too	5 June: Imperial Tobacco (Canada) President Paul Paré gives evidence to the Canadian all-party House of Commons Standing Committee on Health, Welfare and Social Affairs, as the principal spokesperson for the industry: "The tobacco industry – in Canada as elsewhere – has been and continues to be deeply concerned over the question of tobacco's possible effect on some people and has been doing something about this through scientific research and investigation ...efforts are made to blame cigarettes for every ailment with which they may be statistically associated ...It is actually as disservice to those millions who enjoy smoking to be constantly assaulted with some of the extreme and unsubstantiated propaganda that is spread about the so-called evils of smoking ... With respect to people who should not have carrots but eat them, carrots could then be described as being harmful to health." ¹²³

No causal relationship	July: The US Tobacco Institute issues a statement: “The case against smoking is based almost entirely on inferences drawn from statistics, and no causal relationship has been established.” ¹²⁴
Inescapable evidence	September: Helmut Wakeham writes a memo states that “A review of recent mouse skin painting data from Harrogate Laboratories appearing in progress reports of the Tobacco Research Council (Great Britain) indicates strong support for previously published data on the following points: Cigaret [sic] smoke condensate painted on the backs of mice over a two year period produces tumours in numbers proportionate to the amount of condensate applied. In other words, the dose-response relationship is clearly being followed in these experiments ..The mouse skin painting carcinogenicity test, despite all of its short-comings, is widely accepted as the critical test for biological activity of cigaret [sic] smoke. Even the tobacco industry is now hung on this one ...The conclusion from all of this is inescapable: We should start testing our products <u>now</u> because it will be two years before we know the answer ¹²⁵ .”
Research produces emphysema	15 December: A memo is written by a Philip Morris scientist, and copied to senior Philip Morris scientists, Tom Osdene and Helmut Wakeham, entitled “R.J. Reynolds Biological Research Program”. It states: “I met Dr. Price from R.J. Reynolds at the CTR-USA meeting of December 11 and 12, 1969. He mentioned doing chronic cigarette smoke exposure studies with rats. The animals received up to 500 cigarettes and emphysema was produced” ¹²⁶ .
There is still no causal relationship	The CTR issue a press release stating that “There is no demonstrated causal relationship between smoking and any disease....If anything, the pure biological evidence is pointing away from, not toward, the causal hypothesis” ¹²⁷ .

1970s	
Auerbach’s beagles: first time cigarettes directly caused lung cancer in an experiment	1970: 5 February: A Philip Morris memo about Oscar Auerbach’s “smoking beagles” study says: “This is the first time that cigarette smoke as a direct agent has produced lung cancer in an animal in any reliably conducted experiment ...In these researchers’ tests it appears that all of the factors examined were worse the greater the duration and degree of smoking” ¹²⁸ .
Auerbach’s smoking beagles: lung cancer produced	6 February: The <i>New York Times</i> carries the banner headline about Auerbach’s “smoking beagle” study: “12 Dogs Develop Lung Cancer in Group of 86 Taught to Smoke”. This was the first ever experiment that had produced malignant tumours in large animals by exposing them to tobacco smoke. The <i>New York Times</i> concludes that the findings “effectively refute” the contention by the tobacco industry that there was no proven link between cigarettes and lung cancer.

	Auerbach recalled later that: “I knew what we had. We’d been able to duplicate all the changes we’d found earlier in human beings who smoked and suffered from lung cancer. And so the hypothesis [that smoking can induce cancer] was answered in the affirmative” ¹²⁹ .
Lets move research to Europe	24 February: A memo from Joseph Cullman, the president and CEO of Philip Morris, discusses the benefits of conducting research overseas, stating: “The possibility of getting answers to certain problems on a contractual basis in Europe appeals to me and I feel presents an opportunity that is relatively lacking in risk and unattractive repercussions in this country” ¹³⁰ .
An effective experiment that has found cancer and emphysema	25 February: R. Fagan, a scientist at Philip Morris writes a memo to Helmut Wakeham about “Auerbach’s Smoking Beagles saying that: “I would say that the experiment is a crude one but effective in that carcinoma in dogs has been produced ..The crux of the situation is whether there is general agreement by qualified pathologists that [sic] carcinoma, squamous-cell carcinoma has indeed been produced. And even if the cancer production is invalidated, the obvious emphysema produced cannot be denied” ¹³¹ .
A waste of money?	11 March: BAT scientists meet with Thomas Osdene from Philip Morris. According to Osdene the “CTR did virtually no useful work and cost a vast amount of money” ¹³² .
Two months after the smoking beagles study, the Mouse House is closed	March: RJ Reynolds Biological Research Division, employed in the “Mouse House” is abruptly closed. “We are here today to inform you about a significant reorganisation of the Research Department and a reorientation of research programs. In-house biological testing in the smoking health area such as work we have been doing for the Scientific Advisory Board of the Council for Tobacco Research has been terminated. Any further biological testing that may be needed in further developing smoking machines, etc. will be referred to qualified independent research organisations...The Biological division is being dissolved.” ¹³³ .
Lab had produced emphysema	One of the leading scientists at RJ Reynolds, Joe Bumgarner, later recalls his work at the Mouse House and the reasons for its closure: “the research we were doing at the time was state of the art ... it was extremely exciting. We felt we were on the road to making a discovery of a cause and effect relationship to a clinical disease ... I think the company’s lawyers felt that the type of work we were doing was potentially damaging to the company itself and policy was that that wouldn’t happen and that was the legal Department’s policy”. One of the research projects with rabbits had shown that “4-6 Winston Filter Kings inhaled for 6-7 months produce emphysema like changes in the lungs of rabbits” ¹³⁴ .
Ignorance is	Another scientist sacked by RJ Reynolds recalls that the “decision to shut it down was made because Reynolds did not at that time want to be collecting information that might be detrimental to itself-which would be telling the public what its product does. Ignorance is

	bliss” ¹³⁵ .
The smoking beagles prove beyond doubt causation	3 April: The General Manager of Research at Gallaher Limited writes a memo to the Managing Director regarding the work that Auerbach had undertaken on beagles: “We believe that the Auerbach work proves beyond all reasonable doubt that fresh whole cigarette smoke is carcinogenic to dog lungs and therefore it is highly likely that it is carcinogenic to human lungs ... the results of the research would appear to us to remove the controversy regarding the causation of the majority of human lung cancer ... to sum up we are of the opinion that the Auerbach’s work proves beyond reasonable doubt the causation of lung cancer by smoke [bold added] ¹³⁶ ”
Move research to Cologne	7 April: Philip Morris subsequently acquire an interest in a research facility in Cologne, known as INBIFO. A memo from Helmut Wakeham, Head of Research and Development of Philip Morris states: “Since we have a major program at INBIFO, and since this is a locale where we might do some of the things which we are reluctant to do in this country, I recommend that we acquire INBIFO either <i>in toto</i> or to the extent of controlling interest” ¹³⁷ .
Our inflexible attitude is beginning to cause problem	12 June: A Strictly Confidential internal BAT document on “Smoking and Health”, says that “the overriding policy of BAT is to discourage and delay the process of restrictive legislative action by governments in every way possible ... While in the past it has seemed good sense for the industry to contest the validity of all the evidence against smoking (and may still be necessary to avoid damages in lawsuits), there is little doubt that the inflexibility of this attitude is beginning to create in some countries hostility and even contempt for the industry among intelligent, fair-minded doctors ... it is thought that we should reconsider our basic answer on causation which it is suggested should be expressed in future as follows”:
Causation an open problem – need more research	“ As tobacco manufacturers we are not competent to express any authoritative view on a medical matter. We recognise that a substantial number of medical authorities have expressed the opinion that a causal relationship has been established between cigarette smoking and lung cancer and certain other diseases, while some doctors and other scientific experts have expressed doubts about the evidence. It seems to us that, in the absence of clinical proof of the mechanism involved, causation at the present time remains an open question. A solution to the problem will only be found through research and, since the matter first arose, the industry has made and is continuing to make the major contribution in this field” ¹³⁸ .
Its only going to get worse	14 July: S Green from BAT writes a memo stating that: “The cigarette industry is now irreversibly connected with health. Cigarettes will be connected increasingly with a wide range of diseases” ¹³⁹ .
	20 August: One of the US’s principal outside lawyers, David Hardy

No careless statements	writes to B&W about the legal implications of “Careless” statements by company scientists: “In our opinion, the effect of testimony by employees or documentary evidence from the files of either BAT or B&W which seems to acknowledge or tacitly admit that cigarettes cause cancer or other diseases would likely be fatal to the defence of either or both companies in a smoking and health case .. therefore, employees in both companies should be informed of the possible consequences of careless statements on this subject” ¹⁴⁰ .
	10 September: A Report written for Philip Morris concludes that the difference in toxicity of five sampled cigarettes is due to “nicotine delivery” ¹⁴¹ .
Can do in-house research Although others close theirs	16 September: After a meeting with Helmut Wakeham from Philip Morris, a BAT official writes “One result of the greater influence which Wakeham has with Mr. J. Cullman has been the agreement, albeit reluctant, to permit Philip Morris to do ‘in-house’ biological work. When this was first mooted, Wakeham was told that there was a tacit agreement between the heads of US companies that this would not be done. Wakeham had countered by saying that he knew that Reynolds, Lorillard and American were all undertaking some and that Liggett and Myers had never been party to the agreement . Cullman had been incredulous and had phoned Galloway, the President of RJ Reynolds ... there had been a sudden reorganisation at Reynolds, resulting in the closure of the biological section” ¹⁴² .
Lets modify history	October: BAT’s Annual Research Conference is held in Quebec. Three years previously the scientists had agreed that “If there is no inhaling, there is no lung cancer or respiratory disease” However minutes for the 1970 modify the statement, saying “It was accepted, that without inhalation, no association between smoking and respiratory disease could reasonably be alleg [sic] ... In 1967 the corresponding statement was not agreed ¹⁴³ .”
Lets be truthful for once	8 December: Helmut Wakeham, Head of Research and Development of Philip Morris, writes a memo about the CTR to the President of Philip Morris, Joseph Cullman. “It has been stated that CTR is a program to find out ‘the truth about smoking and health’. What is truth to one is false to another. CTR and the Industry have publicly and frequently denied what others find as ‘truth’. Let's face it. We are interested in evidence which we believe denies the allegations that cigarette smoking causes disease [emphasis added]. ¹⁴⁴ ”
Lets shut up	28 December: BAT has managed to advance proofs of the forthcoming RCP report. In a confidential Memo, GC Hargrove writes that: “The agreed policy of the UK tobacco industry on the publication of this report is to say as little as possible at this stage and avoid any form of controversy. No representatives of the industry will be appearing on TV or Radio programmes or granting press interviews. Enquiries on scientific or research matters will be

	dealt with on behalf of the industry by the Tobacco Research Council” ¹⁴⁵ .
Health is outside our remit	In turn, the TRC’s statement is that the RCP’s medical “conclusions are outside the functions of the Council which recognises that these are the concern of the health authorities” ¹⁴⁶ .
Although we need more research	The CTR issues a further press release saying: “The deficiencies of the tobacco causation hypothesis and the need of much more research are becoming clearer to increasing numbers of research scientists” ¹⁴⁷ .
Not unsafe	1971: 4 January: Joseph Cullman, the CEO of Philip Morris, says that cigarettes “have not been proved to be unsafe” to human health ¹⁴⁸ .
RCP 2 nd report – cigarettes causing a holocaust	The Royal College of Physicians publish their second report, Smoking and Health Now”, referring to the death toll by cigarettes as “the present holocaust”. “The suffering and shortening of life resulting from smoking cigarettes have become increasingly clear as the evidence accumulates. Cigarette smoking is now as important a cause of death as were the great epidemic diseases such as typhoid, cholera, and tuberculosis that affected previous generations in this country ¹⁴⁹ .”
Fund research that won’t backfire	2 February: Liggett consider funding research into the “Immunologic Aspects of Cancer” as the “project is designed to attack the disease itself” and “is in no way correlated with the smoking habits of the persons concerned ... I do not see how it could ricochet to our detriment since the smoking habit has no part in the study and , as I said at the outset, the project is not involved in finding causation. ¹⁵⁰ ”
Disservice to public	8 February: B&W statement: “It is our opinion ... that the repeated assertion without conclusive proof that cigarettes cause disease – however well-intentioned- constitutes a disservice to the public” ¹⁵¹ .
Causal relationship open to question	Joe Cullman, CEO of President of Philip Morris tells the Annual Shareholders meeting that: “A causal relationship of tobacco and various ills is increasingly open to question” ¹⁵² .
We will lose the war	May: BAT internal documents reveal that the company’s policy was for to take a “Responsible attitude - avoid controversy don’t fight back - avoidance of press interviews and TV and radio - success of this in that attacks directed at the Government and consumer ... we must face the facts that the medical authorities, Governments and all publicity media and many of the public are against. Therefore if we have a war it will be one which we will lose in the end. A flat denial of causation only arouses hostility and contempt. That is why we have softened our official answer on causation ¹⁵³ ”.
UK: Health warnings	Health warnings are put on cigarettes in Britain: “Warning by HM Government: smoking can damage your health” ¹⁵⁴ .
	Richard Dobson: shortly to become Chairman of BAT: “Its hard to

More good than harm	argue that filling your lungs with smoke can be actually good for you ...But surely it is a question of moderation and I do sincerely believe that the tobacco industry, in total, does more good than harm” ¹⁵⁵ .
Sowing doubt	The Tobacco Institute issues a press release concerning finding the “keys”, which might unlock the door between statistical evidence and causation: “Any organisation in a position to apply resources in the search for those keys - and which fails to do so - will continue to be guilty of cruel neglect of those whom it pretends to serve” ¹⁵⁶ .
Its been a brilliant PR campaign, but time to change tact.	1972: 1 May: A Memo from Fred Panzer of the US Tobacco Institute says: “It is my strong belief that we now have an opportunity to take the initiative in the cigarette controversy, and turn it around. For twenty years, this industry has employed a single strategy to defend itself on three major fronts – litigation, politics and public opinion. While the strategy was brilliantly conceived and executed ...it is not - nor was it intended to be - a vehicle for victory. On the contrary, it has always been a holding strategy, consisting of <ul style="list-style-type: none"> - Creating doubt about the health charge without actually denying it - Advocating the public’s right to smoke, without actually urging them to take up the practice - Encouraging objective scientific research as the only way to resolve the question of health hazard”¹⁵⁷.
Hollow “we are not doctors”	26 July: Dr Green from BAT writes a memo on the “Association of Smoking and Disease”, stating: “I believe it will not be possible indefinitely to maintain the rather hollow ‘we are not doctors’ stance and that, in due course, we shall have to come up in public with a more positive approach towards cigarette safety ...The basic assumptions on which our policy should be built must be recognised and challenged or accepted ... The association of cigarette smoking and some disease is factual” ¹⁵⁸ .
Lethal weapon	The Department of Health’s Chief Medical Officer describes the cigarette as “the most lethal instrument devised by man for peaceful use” ¹⁵⁹ .
So we should stop making it	James Bowling, a Vice President of Philip Morris, says “If our product is harmful ... we’ll stop making it. We now know enough that we can take anything out of our product, but we don’t know what ingredients to take out” ¹⁶⁰ .
Don’t make explicit health claims	1974: 3 May: A BAT document sets out certain “Assumptions” on Smoking and Health, stating that “The association of smoking with various diseases will continue to be a major threat to the tobacco industry ... On legal grounds alone, it will continue to be to the industry’s advantage not to make explicit health claims”. On “Deliberation” it states: “Not to make explicit health claims ... to avoid any

<p>And we'll forget about pregnant women</p>	<p>representative of the tobacco industry appearing on the television in connection with smoking and health unless the alternative is even more undesirable". "Strategies" include "Research on the perceived benefits of smoking should be continued ...BAT will accept that reduction in biological activity per cigarette is sufficient evidence of acceptability on health grounds as a basis for work on alternative smoking materials, both tobacco and non-tobacco."</p> <p>A draft of the document says, under "Policies": "Not to encourage smoking. (1) by children (2) by pregnant women (3) to excess". However "pregnant women" is subsequently crossed out and does not appear in the final version.¹⁶¹</p>
<p>Sought an alternative hypothesis</p>	<p>24 June: Alexander Spears, Head of R&D at Lorillard writes a memo to his company's president, summarising the purpose for the whole range of industry research, whose: " programs have not been selected against specific scientific goals, but rather for various purposes such as public relations, political relations, position on litigation etc". The research has been " primarily aimed at seeking alternative hypothesis [sic] of disease causation [other than tobacco induced] ... in general, these programmes have provided some buffer to public and political attack of the industry, as well as background for litigious strategy"¹⁶².</p>
<p>Close down research</p>	<p>The UK tobacco industry's joint research facilities in Harrogate are closed down¹⁶³.</p>
<p>We are not qualified</p>	<p>1975: March: Sir John Partridge, from Imperial: "As a company we do not make, indeed we are not qualified to make, medical judgements. We are therefore not in a position either to accept or to reject statements made by the Minister of Health¹⁶⁴".</p>
<p>Irreversibly associated with health</p>	<p>April: The Annual BAT Research Conference concludes: "The meeting agreed that the earlier conclusions that cigarette smoking is now irreversibly associated with health issues is still valid¹⁶⁵."</p>
<p>Causally related to lung cancer</p>	<p>April: Dr Green from BAT writes a paper on the "Basis for Research in Smoking": "smoking is associated with a number of diseases and evidence from epidemiological studies suggests that smoking may well be causally related to lung cancer"¹⁶⁶.</p>
<p>Best insurance money can buy</p>	<p>Addison Yeaman, B&W's lawyer says of the CTR that it is the "best and cheapest insurance the tobacco industry can buy, and without it, the industry would have to invent CTR or would be dead"¹⁶⁷.</p>
<p>But it can't get any worse</p>	<p>1976: 15 March: An RJR Document outlining "Planning Assumptions and Forecast for the Period 1976-1986" outlines that: "The negative effect of the smoking-health controversy on consumer behaviour is approaching a maximum, i.e. no new adverse data would be expected to materially change the attitude of the public toward smoking and</p>

	health” ¹⁶⁸ .
No scientific proof	18 March: BAT “In the absence of scientific proof we do not accept that 50,000 deaths or any other number of deaths are caused in this country by smoking though we are of course aware that certain diseases are seen by members of your profession [physicians] to be statistically associated with smoking” ¹⁶⁹ .
But the evidence grows	April: A Report for BAT to “Determine the Costs to Society of Smoking and Abuse of Alcohol, Drugs and Food,” notes “More than thirty retrospective studies in ten countries and seven prospective studies in Canada, the UK and USA have shown that the risk of lung cancer increases directly in relation to the number of cigarettes smoked ... the very strong suspicion of causal relationship between cigarette smoking and cancer can be understood .. ¹⁷⁰ ”
We walk a tightrope	22 October: Dr. Green, Head of Research and Development at BAT and a Board Member writes a report on the “Safety Evaluation of Cigarettes”. “..The cigarette manufacturers, in my opinion, are entitled to say: ‘As long as there is insufficient consensus on risk (but not until there is clinical proof of the mechanism) we are not able to make useful safety judgements - this is in effect the tight rope. Coupled with my previous argument on general (probabilistic) and special (mechanistic) causality which enables the manufacturer to say, even if there ever is consensus on risk, this can only be construed as a general causal relationship applying to the incidence of disease in populations and is not applicable to any unique individual, these are very effective defensive PR and legal positions ... I believe we are in the best public position obtainable in the circumstances” ¹⁷¹ .
We have retreated behind impossible demands for “scientific proof”	27 October: Dr S. Green, writes a paper on Cigarette Smoking and Causal Relationships”: “The public position of the tobacco companies with respect to causal explanations of the association of cigarette smoking and diseases is dominated by legal considerations ...companies are actively seeking to make products acceptable as safer while denying strenuously the need to do so ... The industry has retreated behind impossible demands for ‘scientific proof’ whereas such proof has never been required as a basis for action in the legal and political fields ...It may therefore be concluded that for certain groups of people smoking causes the incidence of certain diseases to be higher than it would otherwise be” (emphasis added ¹⁷² .
Rename	In the US, the TIRC is renamed the Council for Tobacco Research (CTR).
Resist	December: A BAT Board Plan on Smoking and Health stipulates “if Governments suggest wording [on cigarette packs] implying or stating smoking causes certain diseases, companies must strenuously resist with all means at their disposal, until legislation makes it inevitable ... We should not encourage the introduction of product league tables since this leads to implied health claims” ¹⁷³

Evidence mounts	10 December: A Lorillard research report outlines how: “Epidemiological studies indicate that smokers showed increased morbidity and mortality {sic} attributable to coronary heart disease” ¹⁷⁴ .
Keep the controversy open	Ernest Pepples, B&W’s Vice President and General Counsel, writes an internal memo entitled “Industry Response to the Cigarette/Health Controversy”, noting that the industry had responded by producing “more filter brands with lower tar delivery. Support scientific research to refute unfavourable findings or at a minimum to keep the scientific question open ... The significant expenditures on the question of smoking and health have allowed the industry to take a respectable stand along the following lines - ‘After millions of dollars and over twenty years of research, the question about smoking and health is still open’” ¹⁷⁵ .
<p>Death in the West – the film they didn’t want you to hear</p> <p>We don’t kill people</p> <p>Moralistic</p>	<p>In the UK, Thames Television <i>airs “Death in the West – the Marlboro Story”</i>, a film about real cowboys in America dying of lung cancer, made by journalist, Peter Taylor. Philip Morris succeeds in obtaining an injunction preventing Thames ever showing, or distributing, the film again. In the film Taylor interviews Jim Bowling, Vice President of Philip Morris:</p> <p>Q: If you were convinced that cigarettes were killing people, would you stop making them?</p> <p>Bowling: “I’m not in the business of killing people ... If I thought that was so, I would not smoke myself, nor permit my wife or my children to smoke”.</p> <p>Q: As a manufacturer of the world’s largest selling cigarette, are you concerned that the World Health Organisation says that cigarettes are the cause of a world-wide epidemic of a disease, which at present kills hundreds of thousands of smokers per year.</p> <p>Bowling: “I am concerned that people make claims, including those against our products, without adequate knowledge. There has not been the sort of research really that would allow anyone to say that ... From our standpoint, if anyone ever identified any ingredient in tobacco or in smoke as being hazardous to human health or being as something that shouldn’t be there, we could eliminate it”.</p> <p>Q: It is just possible that your refusal to accept the evidence [that smoking may be a health hazard] may be coloured by the fact that you make cigarettes?</p> <p>Bowling: “Is that possible? Well of course that is possible. I think I’m a fairly reasonable human being and not anyway removed from the others of society. I certainly wouldn’t be in the business if I thought cigarettes were harmful to people”.</p> <p>Taylor also interviews Helmut Wakeham, also now a Vice President, who says: “I think that if the company, as a whole, believed that cigarettes were really harmful, we could not be in the business. We are a very moralistic company. I think the management of Philip Morris</p>

<p>company</p> <p>Apple sauce is harmful</p>	<p>is sincere in this position. I think there is a great deal of doubt as to whether cigarettes are harmful ...there is a great deal of doubt with regard to whether smoking causes all these diseases which are alleged to be caused by smoking ...None of the things which have been found in tobacco smoke are at concentrations which can be considered harmful. Anything can be considered harmful. Apple sauce is harmful if you get too much of it¹⁷⁶”.</p>
<p>German research closed down</p>	<p>The world-famous industry research laboratories in Hamburg, West Germany are suddenly closed down. When asked why, one scientist says “we suppose that the Institute was closed down because of the results we were getting from our experiments into arteriosclerosis. If a connection between smoking and vascular disease was established, the cigarette industry would be pushed ever more into the firing line.”¹⁷⁷ According to Dr. Green from BAT, speaking after his retirement, “The director was put on full salary for life if he didn’t talk about it”¹⁷⁸.</p>
<p>3rd RCP Report – causal relationship with heart disease</p>	<p>1977: The Royal College of Physicians issues its third report “Smoking or Health”: “Deaths from coronary heart disease are responsible for about half of the total excess deaths among cigarette smokers ... the association between smoking and heart disease is largely one of cause and effect”¹⁷⁹.</p>
<p>Eliminated contact apart from our dummy address</p>	<p>31 March: A memo from Robert Seligman, a Philip Morris research official, describes the elimination of written contact between the INBIFO research facilities in Cologne and Philip Morris: “We have gone to great pains to eliminate any written contact with INBIFO, and I would like to maintain this structure ...perhaps we should consider a ‘dummy’ mailing address in Koln for the receipt of samples.”¹⁸⁰.</p>
<p>Lets look at the benefits</p>	<p>14 April: P. L Short, from BAT writes a paper on “ Smoking and Health: the Effect on Marketing”, commenting about the “Benefits of Smoking” “The importance of this work is that a direct cause-and-effect relationship can be demonstrated, scientifically, between smoking and improved behaviour in individual ‘subject’, in the course of experiments: something which cannot be demonstrated on the negative (disease) side in humans”.¹⁸¹</p>
<p>Worked out a formula for death from cigarettes – but its not something we should do</p>	<p>19 August: Dr. Jim Green from BAT sends a note to Patrick Sheehy regarding a “Safety Index for Cigarettes”, which uses a formula that includes: “The average loss of life expectancy due to disease”; the relative biological activity of” a component from one cigarette compared to another and the “proportion of deaths caused by smoking”. Assumptions to be used are “95 of all lung cancer deaths are caused by smoking cigarettes”, “average loss of expectation of life due to smoking related diseases are as follows: Lung cancer – 2 years; cardiovascular diseases – 5 years, bronchitis 1 year.” Green recommends that “it is not a path we should encourage anyone to</p>

	follow ¹⁸² .”
Just don't have the evidence	<p>November: BAT Board Strategies on Smoking and Health are outlined in a series of questions and answers:</p> <p>“Q: Do you accept that smoking causes lung cancer and other diseases?</p> <p>A: This has often been suggested but generally the idea of a single cause for such diseases, I understand, is regarded as much too simple. Certainly the great majority of smokers enjoy smoking without injury to their health, and certainly these terrible diseases affect non-smokers as well as smokers ...Cigarette smoking may be hazardous, it may not be ...we just don't have the evidence either way”¹⁸³.</p>
Fudge	A pamphlet from the US Tobacco Institute states: “Has the Surgeon General's report established that smoking causes cancer or other disease? No” ¹⁸⁴ .
We can't admit smoking is bad for you	<p>1978</p> <p>16 February: Thomas S. Osdene, then Philip Morris's Vice President for science and technology, writes that “ an admission by the industry that excessive cigarette smoking is bad for you is tantamount to an admission of guilt with regard to the lung cancer problem. This could open the door to legal suits in which the industry would have no defence¹⁸⁵.”</p>
No scientific controversy	<p>March: The Annual BAT research conference concludes: “There has been no change in the scientific basis for the case against smoking. Additional evidence of smoke-dose incidence of some diseases associated with smoking has been published. But generally this has long ceased to an area for scientific controversy ... The meeting affirmed that cigarettes acceptable on all counts can probably be achieved by research and, indeed, many in fact be available”¹⁸⁶.</p>
Lawyers rule the roost	<p>21 April: A hand-written memorandum by C.H. Judge¹⁸⁷, former Lorillard chief executive and a member of the CTR board, complains that: “We have again abdicated the scientific research directional management of the Industry to the ‘Lawyers’ with virtually no involvement on the part of the scientific or business management side of the business”</p>
Flat earth society	<p>1 June: A memorandum from Dr. Colby from RJR about BATco's Chief Scientist Dr. Felton states: “We have known for many years the Dr. Felton basically agrees with the views of the anti-tobacco scientists, who allege that it has been proven beyond reasonable doubt that smoking ‘causes’ lung cancer and other smoking associated diseases. Dr. Felton totally disagrees with my own convictions and the position of the American Industry in general, that, regarding smoking and health, there is a controversy regarding all the diseases alleged to be associated with smoking. As an example for Dr. Felton's attitude, I would only like to cite that he has labelled me repeatedly as a member of the ‘flat earth society’”¹⁸⁸</p>

Our window on the world	29 September: Ernest Pepples, B&W's Vice President and General Counsel, disclosed in a Memo how B&W had responded in a legal case to the question concerning what the company had been doing to keep abreast of the science surrounding smoking and health: "... Our answer says CTR is our window on the world of smoking and health research. This avoids the research dilemma presented to a responsible manufacturer of cigarettes, which on the one hand needs to know the state of the art and on the other hand cannot afford the risk of having in-house work turn sour ¹⁸⁹ ".
Keep the case open	November: Philip Morris executive, Robert Seligman writes a memo about the CTR: "...Bill Shinn [attorney at Shook, Hardy] described the history, particularly in relation to the CTR. CTR began as an organisation called Tobacco Industry Research Council (TIRC). It was set up as an industry 'shield' in 1954.... Bill Shinn mentioned that the 'public relations'; value of CTR must be considered and continued....A very interesting point, made by Bill Shinn, is the opposition's, 'the case is closed with regard to smoking and disease'.. It is extremely important that the industry continue to spend their dollars on research to show that we don't agree that the case against smoking is closed....There is a 'CTR' basket that must be maintained for PR purposes" ¹⁹⁰ .
Lets look at the benefits	21 November: Minutes of a meeting of the Research Committee for the Tobacco Advisory Council (TAC) (Members are BAT, Carreras Rothmans, Gallaher, Imperial Tobacco, Philip Morris,) show that "it was suggested TAC actively encourage research on the benefits of smoking ... in view of the possible difficulties with work on benefits (for example, the problem of the definition of 'addiction' and the fact that the results might be used against the industry) it was suggested to the EC [Executive Committee] that within-company research might be more appropriate" ¹⁹¹ ..
Not proven	A further pamphlet from the US Tobacco Institute states: "The flat assertion that smoking causes lung cancer and heart disease and that the case is proved is not supported by many of the world's leading scientists" ¹⁹² .
The Continuing Controversy	1979: The day before the latest Surgeon-General's report is published, the US Tobacco Institute issues a booklet "Smoking and Health, 1964-1979: The Continuing Controversy. Its preface is written by the Institute's President, Horace Kornegay: "The process of making public policy is better served when areas of scientific unknowns are illuminated by the light of reasoned deliberation rather than the heat of emotional rhetoric ...It is time for all parties to this [smoking and health] controversy to admit that there is much that is unknown" ¹⁹³ .
Surgeon General	The latest Report of the US Surgeon-General concludes: "cigarette smoking is causally related to lung cancer in both men and women

<p>- Smoking causally related to lung cancer</p>	<p>...is a significant causative factor in the cancer of the larynx ..is a significant causal factor in the development of oral cancer ... is a causal factor in the development of cancer of the oesophagus ... is related to the cancer of the pancreas ... is one of the three major independent risk factors for heart attack.¹⁹⁴”</p>
<p>Industry admits Surgeon-General is sound and that Tobacco Institute is misleading</p>	<p>9 February: P.N. Lee of BAT responds both to the Surgeon-General’s report and the Tobacco Institute’s publication, The Continuing Controversy, which is also identified as TA73. Lee calls the Surgeon General’s report “impressive ..sound, scientific and unemotive”, whilst calling TA73 “misleading”, writing that:</p> <p>“TA73 is <u>so</u> highly selective on what material is presented that one almost gets the false impression there is hardly any case to answer at all ... TA73 does <u>not</u> appear to understand what causation is ... Discussion of the role of other factors can be particularly misleading when no discussion is made of relative magnitudes of effects. For example, heavy smokers are observed to have 20 or more times the lung cancer rates of non-smokers. Sure, this does not prove smoking causes lung cancer, but what it does mean, <u>and TA73 never considers this</u>, is that for any other factor to explain this association, it must have at least as strong an association with lung cancer as the observed association for smoking (and be highly correlated with the smoking habit) ... TA73 seems ready to accept evidence implicating factors other than smoking in the aetiology of smoking associated disease <u>without</u> requiring the same stringent standards of proof that it requires to accept evidence implicating smoking. This is blatantly unscientific”¹⁹⁵..</p>
<p>No conclusive proof</p>	<p>Philip Morris responds to the Surgeon-General’s report by stating that “Although much of the research was concentrated on finding evidence that smoking causes disease, no conclusive medical or clinical proof has been discovered ... the tobacco industry continues to maintain the controversy can be resolved only by medical and scientific knowledge.”¹⁹⁶</p>
<p>Most smokers want to give up</p>	<p>23 April: A BAT report states: “it is now nearly thirty years since Wynder and Graham reported that tobacco smoking ‘ seems to be an important factor in the induction of bronchiogenic carcinoma’ ...more than sixty percent of the UK smoker population ...wish to stop smoking. For more than half of those smokers who had attempted to quit, general or specific health reasons were cited. Of the forty per cent of non-smokers who used to smoke, three quarters were motivated to give up smoking by health concerns”¹⁹⁷ .</p>
<p>Not proven</p>	<p>June: The International Committee on Smoking Issues (ICOSI), a tobacco lobby organisation based in Brussels issues a series of Briefing Sheets. One says that “Scientific research does not support the conclusion that tobacco smoke or constituents in tobacco smoke have been proven to cause disease in humans”¹⁹⁸</p>

Need lawyer control of reports	15 June: In an internal memo, B&W lawyers discuss the mechanisms by which scientific reports are received from BAT in the UK: “Continued Law Department control is essential for the best argument for privilege ... The general policy should be clearly stated that access to the documents and storage of the documents is under control of the Law Department and access is granted only upon approval of request” ¹⁹⁹ .
Forest formed	18 June: Forest, the Freedom Organisation for the Right to Enjoy Smoking Tobacco, is launched in London, whose aim is “to restore and establish freedom of choice ... we are medically unqualified to comment or make judgements [on the health issue]” ²⁰⁰ .
Remember what pays our salaries	18 July: A BAT memo from the Group Research Development Centre, lists one of B&W’s “concerns”: “We become more ‘politically sensitive’ in the areas of smoking and health, e.g., reporting of ‘nasties’ and biological studies generally. (Remember what pays all our salaries.)” ²⁰¹

1980s	
We have misled them successfully with demands for “scientific proof”	1980: 1 January: Dr Green from BAT writes a paper on Cigarette Smoking and Causality: “The cigarette industry has made a great issue of cause and effect relationships in response to the many published studies associating smoking with various diseases. Some might say that the industry has led the anti-smoking forces up the garden path by emphasising so much the issue of causality; in fact scientific proof never has been, is not and should not be the basis for political and legal action on social issues; the test is ‘What would a reasonable man do faced with the evidence?’ Nevertheless many have been led or misled successfully with ‘scientific proof’ ²⁰² .
Demand for proof is usually the sign reaction of the guilty	1 January: A further draft of Dr. Green’s paper “Cigarette Smoking and Causality” states: “A demand for scientific proof is always a formula for inaction and delay and usually the first reaction of the guilty ... By repudiation of any causal role for cigarette smoking in general, lawyers hope to cut off any claim for liability without further consideration of the specific cause in this particular case” ²⁰³ .
Clear dose-response relationship	24 January: An internal BAT memo outlines how “The results from the Ames test [mutagenicity] show a clear dose-response relationship between the total nicotine alkaloid (TNA) content and mutagenicity of the condensate” ²⁰⁴ .
Subjects to avoid	March: A letter from Robert Seligman from Philip Morris, outlines “potential long-term scientific studies” including “subjects to be avoided”. The latter included “Developing new tests for carcinogenicity; Attempt to relate human disease to smoking; and conduct experiments which require large doses of carcinogen to show additive effect of smoking” ²⁰⁵

Continuing controversy	14 April: Patrick Sheehy, writes to BBC <i>Panorama</i> which is due to screen a programme on smoking and health: “On behalf of my Board, I wish to make it absolutely clear that it is this company’s view that there is a continuing controversy in scientific circles regarding causation, and scientists are no means unanimous regarding smoking and health issues ... we would therefore ask you to ensure that the programme disassociates the views of the scientist in question [Dr. Green] from those of this company by making an appropriate statement to this effect in the programme ²⁰⁶ .
Ex-scientist says smoking factor in lung cancer meanwhile	On <i>Panorama</i> , Dr Green, now retired from BAT, admits: “I am quite sure that it [smoking] is a major factor in lung cancer in our society”. Meanwhile, Alan Long, President of Santa Cruz, a BAT subsidiary in Brazil: “The medical evidence as far as I am aware is of a statistical nature. It is, as you know, the industry’s view that no evidence has been produced to establish a causal relationship between smoking and any of the diseases with which it has been associated” ²⁰⁷ .
On causation we are not believed anymore	16 May: A secret BAT document shows that “The company’s position on causation is simply not believed by the overwhelming majority of independent observers, scientists and doctors ... The industry is unable to argue satisfactorily for its own continued existence, because all arguments eventually lead back to the primary issue of causation, and this point our position is unacceptable ... our position on causation, which we have maintained for some twenty years in order to defend our industry is in danger of becoming the very factor which inhibits our long term viability ”.
By giving nothing we stand to lose everything Smoking is harmful	The document then recommends the disadvantages and advantages to “continue to maintain our present position on causation” or “we can move our position on causation to one which acknowledges the probability that smoking is harmful to a small percentage of heavy smokers ... On balance, it is the opinion of this department that ... we should now move to position B, namely, that we acknowledge ‘the probability that smoking is harmful to a small percentage of heavy smokers’ ... The ideas suggested above are in some cases a radical departure from our current practice although nearly all of them have echoes in our overall policy and attitudes. The problem to date has been the severe constraint of the American legal position. This problem has made us seem to lack credibility in the eyes of the ordinary man in the street. Somehow we must regain this credibility. By giving a little we may gain a lot. By giving nothing we stand to lose everything” ²⁰⁸ [emphasis added]
But its not proven	An Appendix of the document outlines a new stance on Smoking and Health: “It has never been proven that smoking causes any ill health. Nevertheless, we recognise that there is a body of responsible medical opinion which believes that smoking (either on its own or in combination with other environmental or genetic factors) causes or contributes to various diseases in a minority of smokers” ²⁰⁹

But it can cause cancer	Another BAT document put forward “Possible positions on smoking and health”. In answer the question: “Does BAT think that smoking causes diseases such as cancer?” The “Moderate” reply is “Yes, we think that some people can contract disease through cigarette smoking especially if they smoke excessively”. Another answer, under the heading, “Portmandean”, the answer is “Yes, and even though there is no medical proof, we think the statistical evidence is enough to demonstrate that for some individuals cigarette smoke will act with other factors to cause disease of the lung” ²¹⁰ .
And is dangerous	16 May: A further BAT document, Draft Number Three on “A New Company Approach to the Smoking and Health Issue, says: “We now accept that the smoking of tobacco products, combined with other factors such as genetic pre-disposition, air pollution, and psychological temperament is dangerous to the health of a small minority of smokers and can be a cause of lung cancer, emphysema and other respiratory and coronary diseases, many of which are fatal”. ²¹¹
Dangerous research too.	August: Dr. A. Sanford, Vice President of Research and Development at B&W outlines the research priorities at BAT’s Annual conference. Talking about irritation and inhalation of smoke he writes: “Dangerous area. Please do not publish or circulate. No more work needed on biological side” ²¹² .
PR and marketing take over	1981: February: Notes of an interview with Dr Jim Green after his retirement, who for 20 years the head of research at BAT summarises the decades of health research. “At the beginning of the sixties the tobacco companies realised there was serious evidence connecting smoking and ill health. Their first reaction was to spend money on research to see if this was true, in the hope that it wasn’t, so they could win the argument. When this failed, the research effort was directed to finding a safe cigarette, through the development of substitutes. When this flopped in the mid-seventies there was a sharp change of direction. New, corporate careerists were now in charge of the companies and they had fewer qualms about the business they were in; research was redirected to serve the interests of marketing. This development coalesced rather well with the attitude that the companies had taken towards the health risk and regulation policy. On the advice of their PR man , they pursued a ‘tight-rope’ policy on health ... and entered into voluntary agreements because this bought them time” ²¹³ .
And the truth	20 February: Notes of a meeting between Professor Adlkofer, the Director of the Scientific Division of the Verband, the German Tobacco research organisation and executives from RJ Reynolds, show that Adlkofer is asked to resign his post within the tobacco industry for stating that: “Smoking is a risk factor for certain diseases

won't do	which have multi-causal origins and that smoking plays a more or less significant role". However "such a position by a scientist in a responsible position could not be tolerated for ever by the industry because of the current product liability in the US and, possibly later, in the EC." ²¹⁴
Additives are a problem too	11 September: Dr. J. G. Esterle, Manager of Smoking and Health Affair at B&W, writes a memo about a "suggested programme for testing biological activity of our cigarette additives", in which he states that "the regulatory and anti-smoking agencies have identified, at least from a PR standpoint, a weakness. That is that the additives are potentially altered during smoking which may provide a new health risk to the smoker" ²¹⁵
Destroy the data	25 September: In an internal memo to B&W, an attorney from Shook, Hardy and Bacon proposes that; "if company testing began to show adverse results pertaining to a particular additive, the company control would enable the company to terminate the research, remove the additive and destroy the data" ²¹⁶ .
No proof	November: Dr. L. Blackman: Director of R&D, BAT: "Despite a never-ending stream of research on the possible health hazards of smoking, there is no proof of a cause and effect relationship between cigarette smoking and various alleged smoking diseases" ²¹⁷ .
No proof	November: Chairman of RJ Reynolds: "We believe that the campaign against tobacco is based on statistical inferences unsupported by clinical findings" ²¹⁸ .
Surgeon-General: Most important public health issue of our time	1982: The new US Surgeon-General confirms all the findings of his predecessors by concluding that: "Cigarette smoking ... is the chief, single, avoidable cause of death in our society, and the most important public health issue of our time" ²¹⁹
Still we deny	2 February: The Chairman of the Board of RJ Reynolds appears on television to state: "It is not known whether cigarettes cause cancer" ²²⁰ .
We are in trouble Lets face facts: Cigarettes are biologically active	23 February: A memo by Philip Morris researcher J. L. Charles states that "This company is in trouble. The cigarette industry is in trouble. If we are to survive as a viable commercial enterprise, we must act now to develop responses to smoking and health allegations from both the private and the government sectors. The anti-smoking forces are out to bury us ... The Surgeon General's press conference was disturbing. For the first time associations between cancers other than the lung and cigarette smoking are being made in an emphatic manner. Associating cigarette smoking with 30 per cent of all cancer deaths should make someone sit up and take notice ... Let's face facts: Cigarette smoke is biologically active. Nicotine is a potent pharmacological agent. Every toxicologist, physiologist, medical

	doctor and most chemists know that. It's not a secret. Cigarette smoke condensate applied to the backs of mice causes tumours... ²²¹ .
No breakthrough envisaged	April: Secret BAT Board Guidelines include the assumption that: "Associations of various diseases with smoking are regarded by authorities, the media and the general public in developed countries as having been established ...no sudden breakthrough is envisaged to solve the smoking and health problem ... carbon monoxide, oxides of nitrogen, nitrosamines and other constituents will become increasingly regarded by certain scientific experts as health hazards for smokers ²²² ".
There is no scientific controversy	4 May: Francis Roe, an independent scientist acting as a consultant for BAT reviews the company's draft publication entitled "The Issues of smoking". He summarises that "it falls a long way short of credibility and it would be disastrous to release it as BAT's considered view in this country ...It is not true, as the American Tobacco industry would like to believe that there is a raging world-wide controversy about the causal link between smoking and certain diseases." In conclusion Roe says the documents "reads to me like a mixed marriage between traditional American lawyer exhaled gas and discretely coughed-up Anglo-Saxon phlegm" ²²³ .
Oh yes there is	June: Sir Peter Macadam Chairman of BAT: "The company is aware ...of the statement made by the US Surgeon General. However, our company holds the view that statistical data is far from conclusive and that the continuing controversy that surrounds smoking is best resolved by research" ²²⁴ .
And don't ask us	September: On the issue of smoking and health, the Chairman of Rothmans says that the company "never comments on opinions expressed by members of the medical profession" ²²⁵ .
We are committed to the task	The Tobacco Institute publishes a pamphlet in which it writes: "Since the first questions were raised about smoking as a possible health factor, the tobacco industry has believed that the American people deserve objective, scientific answers. The industry has committed itself to this task" ²²⁶ .
And take it seriously	P. Sheehy: The new Chairman of BAT: "Smoking and health is an issue that my company and the industry takes very seriously" ²²⁷ .
But it remains unresolved	Edward Horrigan, the Chief Executive of RJ Reynolds, exclaims that: "After three decades of investigation and millions of dollars invested by the government, the tobacco industry and private organisations, the smoking and health controversy remains unresolved" ²²⁸ .
And still open	Around 1982: BAT issues a document "Cigarette Smoking: the Issues and the Facts" stating that BAT "believes this remarkably extensive research reflects an intense scientific controversy over the entire range of questions about smoking and health and shows that the issues, including causation. Are still very much open" ²²⁹ .

Associated with lung cancer	1983: 16 February: Notes of a meeting of the Research Directors from Imperial, Gallahers, Rothmans, Philip Morris and BAT summarises the “main views of the scientists. “Epidemiological data suggests a lower incidence of bronchitis, emphysema and heart disease among smokers of filter as opposed to plain cigarette – though generally the association is weaker than that with lung cancer ...it is widely held that the particulate or tar component of whole smoke is associated with lung cancer ²³⁰ ”.
Look at the benefits again	March: BAT’s Chairman Advisory conference decides that the “the subject of perceived benefits to the smoker is important for the future and should be used in public relations. ²³¹ ”
Continuing controversy	P. Sheehy: Chairman of BAT addresses the AGM: “Although a vast sum of money has been spent on research into the question of smoking and health, the issue is still a matter of controversy” ²³² .
Keep all research results out of the US	27 October: Dr Blackman visits B&W in the US. He reports that: “B&W are keen to participate in the programme conceived at the BCAC and further development at the Research Conference. They recognise, however, severe legal implications regarding product liability which have yet to be resolved by the lawyers. Until guidelines are issued, any contact between GR&DC and B&W should be by telephone. Two possibilities being considered are: 1. Do not assess the biological activity of commercial US products but use representative blends 2. Use the commercial products but keep all results in Southampton ²³³ ”.
4 th RCP report: Smoking still kills	November: The fourth report of the Royal College of Physicians is published: “Smoking still kills, and at a time when some 100,000 of our citizens are dying prematurely from its effects every year and millions more will die elsewhere, the RCP would be failing in its duty if it did not urge the government to reverse its present attitude of inactivity and even of encouragement towards the tobacco industry and tackle this hidden holocaust.” ²³⁴
No evidence smoking is bad for you	In part it examines how company officials have responded to questions of smoking and health. It quotes the Chairman of Rothmans International, Sir David Nicholson, who said, as a Member of the European Parliament: “There is no medical evidence to prove that a few cigarettes -say ten to fifteen a day - are bad for you”. ²³⁵
Open controversy	An RJR advertisement proclaims: “It has been stated so often that smoking causes cancer, it's no wonder most people believe this is an established fact. But, in fact, it is nothing of the kind. The truth is that almost three decades of research have failed to produce scientific proof for this claim...in our opinion, the issue of smoking and lung cancer is not a closed case. It's an open controversy” ²³⁶ .
	1984:

Trotting out statistics	January: The trade journal <i>Tobacco</i> , responds to the RCP by accusing it of “trotting out the usual unverifiable statistics in smoking-related premature deaths” ²³⁷ .
Benefits of people dying young	February: Leaked minutes of a meeting between Forest’s Stephen Eyres and the Centre for Policy Studies on smoking deregulation, show that Mr Eyres, “accepted that smoking might cause premature death, but this would if anything reduce the cost to the NHS, and the taxes paid by smokers (£4,000 million) anyway far outweighed the costs £155-300 million). ²³⁸ ”
Genuine scientific controversy	March: A BAT document outlines “Legal Considerations On Smoking and Health Policy, stating: “it [smoking] may be responsible for the alleged smoking related diseases or it may not. No conclusive scientific evidence has been advanced and the statistical association does not amount to proof or cause and effect. Thus a genuine scientific controversy exists. The Group’s position is that causation has not been proved and that we do not ourselves make health claims for tobacco products. Consequently the group cannot participate in any campaigns stressing the benefits of a moderate level of cigarette consumption, of cigarettes with low tar and /or nicotine deliveries or any other positive aspects of smoking except those concerned with the dissemination of objective information and the right of individuals to choose whether or not they smoke” ²³⁹ .
Industry labs close	5 April: In the US, the Philip Morris laboratories are closed. A scientist was told the company did not want generated inside the company, that it was information that would not be favourable to the company in litigation” ²⁴⁰ .
Mutagenic League tables	9-11 April: At a BAT “Biological” Conference held at Southampton, “Project Rio” is discussed, which is a project designed to organise the company’s research on cigarettes having reduced biological activity. Notes from the meeting show that, using the Ames test, which is a measure of mutagenicity, “it is clear that: (1) Cigarette <u>brands</u> can be readily distinguished. This is in contrast with the earlier mouse skin painting results. An unfortunate side-effect is that the sensitivity increases the probability of an Ames [mutagenicity] League Table appearing. A further unfortunate examination is that, to date, it is not uncommon for BAT brands to have a higher result than those from the opposition” ²⁴¹ .
Need more lawyers	June: J.K. Wells, B&W’s Corporate Counsel writes a memo: “Direct lawyer involvement is needed in all BAT activities pertaining to smoking and health from conception through every step of the activity. The problem caused by BAT scientists and frequently used consultants who believe cause is proven is difficult” ²⁴² .
Because smoking is	July: A joint BAT R&D Marketing conference, heard results of Project Rio, which “appear to indicate ... that human smoking does influence biological [learning] activities relative to standard

	conditions” ²⁴³
Science is on our side	17 July: Retiring President of Philip Morris, George Weissman says: “I’ve always felt science was on our side ...and that we had more regard for the scientific truth as it existed” ²⁴⁴ .
Smoking isn’t bad	RJ Reynolds runs a \$20 million advertising campaign in America: “Over the years you have heard so many negative reports about smoking and health and so little to challenge these reports that you may assume that the case smoking is closed. This is far from the truth” ... there is “considerable evidence to contradict the common assumption that smoking is bad for you” ²⁴⁵ .
Lets remove “deadwood”	1985: 17 January: B&W’s Corporate Counsel outlines a plan to deal with certain company documents relating to smoking and health: “I suggested that Earl have the documents indicated on my list pulled, put into boxes and stored in the large basement storage area. I said that we would consider shipping the documents to BAT when we had completed segregating them. I suggested that Earl tell his people that this was part of an effort to remove deadwood from the files and that neither he nor anyone else in the department should make any notes, memos or lists” ²⁴⁶ .”
Good corporate citizens	February: Rothmans: “We are very good corporate citizens and we recognise our responsibilities to our staff and customers and to the social structures of the countries where we operate” ²⁴⁷ .
Adverse effects of not smoking	March: Forest: “Whatever the adverse effects of smoking on health, there are also beneficial effects of smoking and adverse effects of not smoking” ²⁴⁸ .”
Marketing needs dictate	26 April: EE Kohnhorst, Manager of B&W Development Centre, responds to a letter from BAT, regarding carbon monoxide (CO) in cigarettes, stating: “I do not see involving ourselves in designing products with the limited objective of reducing CO in the near future unless marketing needs dictate otherwise” ²⁴⁹ .”
6_ years less if you are a smoker	30 April: An internal BAT letter discusses a talk by an expert for the American Cancer Society on death rates in the US: “Male smokers have a life expectancy 6.6 years less than non-male smokers at age 35 .. smoking has a greater statistical effect on life expectancy than either ill-health or gender” ²⁵⁰ .”
Respected by most people	September: BAT Director: “We are respected by most people. We maintain standards and impartially and just get on with doing our job” ²⁵¹ .
Need a step forward for smoking and	September: The five priorities for BAT R&D are outlined: 1. “Product/smoke quality to be as good as, and preferably better than, competitors; 2. Develop technology to be the lowest cost producer and others necessarily of a longer term nature;

health	<p>3. Produce a recognised step forward on the S&H [smoking and health] issue;</p> <p>4. Remove concern for passive smoking by various initiatives including superior products</p> <p>5. Develop alternative products”²⁵²</p>
Risk more restrictions	<p>2 November: Anne Johnson, from BAT’s legal Department, writes a Memo, one section which is entitled “Reasons for Making Public Statements on Smoking and Health”: “If we fail to make the facts and our views known in smoking and health, we run the risk of seeing the introduction of more and more restrictions - some unacceptable and unwarranted - on our products, our commercial objectives and our freedom to operate. If we have no statement to make, the new lose credibility with government, and the public (including shareholders and employees)”.</p>
Need a balanced picture Need more research	<p>“We have a responsibility - both legal and moral - as a cigarette manufacturer to ensure that people are aware of the facts relating to our products, that a factual and balanced picture is presented, and that inaccuracies and imbalance are corrected ...we recognise that there are legal constraints in the US which we must observe and we appreciate the practical problems of discussing causation...”</p> <p>Johnston then outlines the arguments that BAT should make regarding the health effects of smoking: “There is a lot of evidence which links smoking statistically with certain diseases ...statistics alone cannot prove cause and effect ...research is needed to clarify the situation”²⁵³.</p>
Wrong to say smoking is safe	<p>Johnson’s Memo contains an Appendix by Dr. Ray. Thornton, the smoking and health advisor at BAT’s research centre, who states that, it is “impossible to claim as a fact that smoking is the only or main cause of lung cancer and other diseases .. it is equally impossible and quite wrong -factually and morally - to suggest or imply that smoking is safe or free from risk or that the risks are not particularly great”²⁵⁴.</p>
BAT closes in-house research	<p>BAT terminates in-house biological research. An internal memo states: “All animal work to be terminated a.s.a.p. Finish current work on animal tissues (inc. tissues from animals just killed) and report within 3 months. All in-house animal work will cease and future studies involving animals will be done externally under contract. . . . More resources will be provided for research into means of enhancing nicotine transfer to smoke and experimental combustion research, including cigarette paper effects”²⁵⁵.</p>
Not been scientifically established	<p>RJ Reynolds state the official Company position in the lawsuit <i>Browner vs. Reynolds</i>: “Smoking has not been scientifically established as the cause of any human disease. Scientists simply do not know the cause or causes of the diseases claimed to be associated with smoking. Nor do they understand the mechanism or mechanisms whereby these diseases develop”²⁵⁶.</p>
	<p>The new President of Philip Morris, Harish Manuwall, says of the</p>

Living is hazardous	health risk: “What I feel is that living is hazardous. Most of the things you want to do are more hazardous than just breathing. As time goes on, smoking will be seen in that context” ²⁵⁷ .
Time to change tact again	1986: 13 June: An internal RJ Reynolds memo states: “ As a long-term solution to the public’s view of tobacco, I think the companies should reverse the position that problems don’t exist with tobaccos. We should explain to the public that thresholds for biological effects exist, the concept of biochemical individuality and that we are attempting to make new products which address their concerns ... the tobacco industry has not been able to adjust to the ‘baby-boom’ adults who currently are the main economic force in the market. This population is concerned with perception, health, group rights and quality of lifestyle. Our marketing Department has taken advantage of these but R&D has not. We need to adjust our products in light of these concepts for the present time period” ²⁵⁸ .
Smoking Kills?	August : Clive Turner of the Tobacco Advisory Council on the new health warnings on packets: “We weren’t prepared to accept a ‘smoking kills’ label. These are draconian messages and we are under no obligation to accept them” ²⁵⁹ .
Health question unresolved	The US Tobacco Institute states that “Industry support of independent research is in excess of \$130 million and has resulted in publication of nearly 2,600 scientific papers. Eminent scientists believe that questions relating to smoking and health are unresolved and the tobacco industry will make new commitments to help seek answers to those questions” ²⁶⁰ .
Not scientifically proven	1987: September: PJ Hoult, RJR Macdonald in Canada: “The tobacco manufacturers do not believe that the alleged dangers to health have been scientifically proven, but agree that smokers should continue to be made aware of such allegations” ²⁶¹ .
Unresolved	24 November: In Canada, Jean-Louis Mercier, President of Imperial Tobacco Canada, appears before a House of Commons Committee. Asked whether he believed that any Canadian died of smoking-related disease, he replies: “No I do not ...[the] role, if any, that tobacco or smoking plays in the initiation and the development of these diseases is still very uncertain. The issue is still unresolved.” ²⁶²
Scientific causality not proven	27 November: Patrick Sheehy, Chairman of BAT talks about Multinationals: Economic Power and Responsibility: “While there is concern about the statistical relationship between smoking and certain diseases, scientific causality is not proven” ²⁶³ .
In fact no one	William Kloepfer: US Tobacco Institute: “Smoking may or may not be harmful to some individuals. We say that we do not know and we

knows	do not think that anyone else knows either. We certainly do not go about telling people its all poppycock” ²⁶⁴ .
I did nothing	1988: 17 February: Milton Harrington, former President and CEO of Liggett, who had headed the company when the Surgeon-General’s report was issued in 1964, appears in the Cipollone trial in the US. Q: “What, if anything did you do in response to the Surgeon General’s report”? A: “I read the report”. Q: “What else did you do”. A: “Nothing”.... Q: “What does the phrase ‘smoking and health’ mean to you”? A: “Not anything particularly, really .. I didn’t think about anything about smoking and health other than smoking was not harmful to you in any way” ²⁶⁵ .
Nothing proves anything	February: Joseph Cullman, retired Chairman of Philip Morris, appears at the <i>Cipollone</i> trial at the US District Court in New Jersey: “There was nothing at the time - and there still isn’t - that proves causally that cigarettes cause lung cancer” ²⁶⁶ .
Legal opinion	6 February: Judge Lee Sarokin who is presiding over the <i>Cipollone</i> trial, writes that it would be reasonable for a jury to conclude that the US TIRC was “nothing but a hoax created for public relations purposes with no intention of seeking the truth or publishing it” ²⁶⁷ .
No proof	April: A Philip Morris booklet on Activities in the Third World says “there is no conclusive proof of a cause-and effect relationship between cigarette smoking and chronic diseases, and the Company will continue to challenge allegations to the contrary” ²⁶⁸ .
Cigarettes contain flavours to fungicides	1 November: An industry memo outlines a non-exhaustive classification of non-tobacco material that might be found in cigarettes: “flavours, sugars, humectants, casings or sauce materials, insecticides, herbicides, fungicides, rodenticides, pesticides, water conditioners and manufacturing machine lubricants and other chemicals which come in contact with the tobacco and may leave residues on the tobacco” ²⁶⁹ .
Sincere attempt	29 December: RJ Reynolds on the CTC: “Long before the present criticism began, the tobacco industry, in a sincere attempt to determine what harmful effects, if any, smoking might have on human health, established the Council for Tobacco Research” ²⁷⁰ .
Judgement day	1989: March: Tobacco Institute of Hong Kong: “The view that smoking causes specific diseases remains an opinion or a judgement, and not an established scientific fact” ²⁷¹
	September: Steve Weiss, Philip Morris, responds to a question about

Opinionated statement	whether there is a contradiction between the vigour of athletes and disease caused by smoking: “I disagree with your premises ..You’re saying that cigarette smoking causes a disease ... That’s a very opinionated statement. I’d appreciate a little more open-mindedness .. I disagree with a journalists who calls and issues a very opinionated statement, when the credo of journalism is balance, fairness and accuracy ²⁷² ”.
Neutral stance	October: C. Burrell, Rothmans: “All the tobacco industry can do is to adopt its traditional neutral stance” ²⁷³ .

1990s	
It is proven – Oops – no its not	1990: 9 January: A Mr. Olli Laiho, takes up his position as the new Managing Director of the Amer Tobacco Company in Finland: “The causal relationship between smoking and cancer has been totally proven.” To which his boss, replies “Oh, hell”. The following day Mr Olli Laiho makes a further statement: “It has not been proven that tobacco would cause those disease. Statistical relationships, which I meant, is not identical to causal relationship” ²⁷⁴ .
Smoking is not a health threat	March: Forest organises a Conference “In Defence of the Right to Smoke”. Says Forest’s Chris Tame: “Smoking is not a health issue, but an ethical and political one” ²⁷⁵ .
More research needed	August: A talk by a Senior BAT Executive at Chelwood outlines that: “On the issue of scientific evidence, a statistical association between the habit of smoking and certain diseases has been claimed in epidemiological studies. However, the mechanisms of these diseases are not understood and it has it been established what role, if any, smoking plays in the initiation or development of the diseases. It is the view of BAT that further research is required on this complex subject. A statistical association alone is not proof of causality” ²⁷⁶ .
Not the cause of disease	P. Sheehy: Chairman of BAT: “BAT’s policy on smoking is very clear. Our view is that smoking has not been established to be the cause of disease” ²⁷⁷ .
Smoking is a risk factor	Philip Morris states in its Annual report: “ We have acknowledged that smoking is a risk factor in the development of lung cancer and certain diseases, because a statistical relationship exists between smoking and the occurrence of these diseases. Accordingly we insist that the decision to smoke, like many other lifestyle decisions, should be made by informed adults. We believe that smokers around the world are well aware of the potential risks associated with tobacco use, and have the knowledge necessary to make an informed decision” ²⁷⁸ .
Don’t know	A RJ Reynolds public relations executive writes: “. . . scientists do

cause of the disease	not know the cause or causes of the chronic diseases reported to be associated with smoking ...Our company intends, therefore, to continue to support [research] in a continuing search for answers” ²⁷⁹ .
Not scientifically established	1991: May: Confidential Key Area papers for BAT: “The company’s position is that whether or not smoking is a cause of human disease has not been scientifically established ... BATco’s views on smoking and health should be clearly communicated to key audiences whenever suitable opportunities arise” ²⁸⁰ .
	26 June A report in the <i>American Journal of Public Health</i> finds that 91 per cent of the scientists who get research money from the tobacco industry believe that the majority of lung cancer deaths are caused by tobacco. ²⁸¹
Smoking kills	New health warnings are introduced in Britain: “Smoking Kills” ²⁸² .
Damning legal opinion	1992: 2 February US Judge Sarokin rules in the tobacco case <i>Haines v. Liggett Group</i> that: “All too often in the choice between the physical health of consumers and the financial well-being of business, concealment is chosen over disclosure, sales over safety, and money over morality. Who are these persons who knowingly and secretly decide to put the buying public at risk solely for the purpose of making profits and who believe that illness and death of consumers is an apparent cost of their own prosperity. As the following facts disclose, despite some rising pretenders, the tobacco industry may be the king of concealment and disinformation” ²⁸³ .
We don’t smoke that s***	2 June: An actor promoting RJ Reynolds products asks an Executive why he does not smoke. He is told: “We don’t smoke that s***. We just sell it. We just reserve the right to smoke for the young, the poor, the black and the stupid” ²⁸⁴ .
Causation not established	August: Brennan Dawson from the US Tobacco Institute says that the Institute “on behalf of the industry recognises that smoking may be a risk factor for different diseases. The scientific evidence, however, is based on epidemiological studies. Those studies show risk factors, not causation. Causation has not been established” ²⁸⁵ .
Scientist says its time for the truth	September: Anthony Colucci, a former scientist with RJ Reynolds, states: I’m a scientist who says: ‘It’s about time they quit this charade. I’m sick and tired of the way they distort and ignore the science. It’s time for them to tell the truth ... They had a responsibility early on to tell what their own researchers were finding out. Instead, they ignored it and made a mockery of it. I think it’s time for the tobacco industry to say: ‘ This stuff kills people. We know that. Smoke at your own risk’” ²⁸⁶ .

No laboratory proof	<p>1993:</p> <p>October: BAT organises Press Conference in South Africa and Sri Lanka to try and “restore the balance” of the public health risks of smoking. The same month United Tobacco Company Limited, BAT’s South African Subsidiary paid journalists from Southern Africa to a seminar in Mauritius to hear a number of speakers refute allegations over smoking and health. Dr Sharon Boyse head of the Smoking Issues Department at BAT says: that “Smoking has not been proven to be a cause of disease, and that smoking is simply a ‘risk marker’ for diseases like lung cancer, in the same way that driving licences are risk markers for car accidents” According to Boyse, there is “absolutely” no laboratory proof that smoking is directly related to lung cancer or heart disease²⁸⁷.</p>
No proof – no comment	<p>December: BAT adopts a Statement of Business Principles: “It is important that statements made concerning cigarette smoking and health related issues be factually and scientifically accurate: It is the considered view of the Group that</p> <p>(1) scientific causation between smoking and diseases allegedly related to smoking has not been established and that</p> <p>(2) the group should not make health claims for tobacco products in connection with product promotion”²⁸⁸.</p>
I would tell my daughter it isn’t safe to smoke	<p>1994:</p> <p>20 March: Steven Parrish, Philip Morris USA General Counsel, tells a reporter how he had responded to his daughter, and would respond on cigarettes and health: “If she asked me about the health consequences, I would tell her that I certainly don’t think it is safe to smoke. It’s a risk factor for lung cancer. For heart disease. But it’s a choice. We’re confronted with choices all the time. Still, I’d have to tell her that it might be a bad idea”²⁸⁹</p>
But it doesn’t cause death	<p>14 April: Seven US tobacco CEO’s testify before Congress. Andrew Tisch from Lorillard, says whether he stands by his statement that he did not believe that smoking causes cancer, to which Tisch replies: “I do sir ..We have looked at the data and the data we have been able to see has all been statistical data that has not convinced me that smoking causes death”²⁹⁰.</p>
No view	<p>April: At the AGM of Imasco, Imperial Tobacco’s (Canada) parent company, which in turn is controlled by BAT, Chairman Purdy Crawford, is asked how many deaths are caused by tobacco use, to which he replies: “We have no view on that”²⁹¹.</p>
Don’t know	<p>1 September: Imperial Tobacco (Canada) spokesperson, Michel Descoteaux tells <i>CTV National News</i> “we don’t say that smoking is good for you, we don’t say that smoking is bad for you. All we are saying is that in the state of current knowledge we do not know”²⁹².</p>

Thomas Sandford testifies before the Warren Committee and

Tomato juice causes tumours	responds to the question about how he can consider smoking not to be harmful, when their company experiments, especially with mice, show that it is: “I can tell you that I’m told you can take concentrated tomato juice and put it on mice - the skin of mice and create the same type of tumours .. I have also been told that fresh smoke has never demonstrated anything like this” ²⁹³ .
Pregnant woman	1995: 28 April: Geoffrey Bible, CEO of Philip Morris, “It would be sensible for pregnant women not to smoke” ²⁹⁴
Total recall	May: Philip Morris recalls 8 billion cigarettes saying that a contaminant in the filters had produced a toxic chemical that is used as a pesticide. Philip Morris said that continued use of the chemical could “result in temporary discomfort, including eye, nose, and throat irritation, dizziness, coughing and wheezing” ²⁹⁵ .
Smoking is a risk factor – but that doesn’t mean causation	30 May -1 June: An internal Training Manual for Philip Morris outlines 3 key messages on health: <ul style="list-style-type: none"> - “PM acknowledges that smoking is a risk factor in the development of lung cancer and certain other human diseases, as indicated by the statistical relationship between smoking and the occurrence of those diseases. - Risk factors associated with human diseases are often incorrectly equated to causes. Statistical association between an exposure and an illness or condition does not mean that the exposure caused illness or death. For example, the causes and origins of lung cancer remain unresolved and there is still an ongoing debate as to whether smoking can be linked to cause. - Philip Morris insists that any decision to smoke should be made by informed adults - it is their choice, which they make when fully aware of the health hazards involved”²⁹⁶.
Might or might not	1996: 10 March: Sharon Boyce: the former BAT scientist, now acting as a consultant for the company: “:We’re not trying to sell anybody a line. We just think that sometimes the emotion of the debate gets in the way of science ... The only point the tobacco industry and many other independent scientists are trying to make is that at the moment we really don’t know, smoking might cause disease or it might not” ²⁹⁷ .
Keep in Cologne	19 September: Lawyers in Minnesota uncover an undated Philip Morris memo which discusses research documents: “1. Ship all documents to Cologne, Germany ...2. Keep in Cologne. 3. OK to phone and telex (these will be destroyed) .. If important letters or documents have to be sent, please send home - I will act on them and destroy” ²⁹⁸ .
	9 October: A spokesperson for B&W says: “We’ve always said that

Revise history?	smoking was a risk factor in certain diseases but that the precise mechanism that causes those diseases is not fully understood” ²⁹⁹ .
We do not conceal	31 October: Martin Broughton, Chief Executive BAT: “We have not concealed, we do not conceal and we will never conceal ... we have no internal research which proves that smoking causes lung cancer or other diseases or, indeed, that smoking is addictive.” ³⁰⁰ ”
Always been open	31 October: Lord Cairns, Chairman of BAT “Insisted the company had never kept from the public ‘any conclusion establishing that smoking causes diseases’” ³⁰¹ .
The missing link?	December: <i>Science</i> magazine reports finding of a study at the University of Texas that reports to have found the “missing [causal] link” in cancer. RJR responds by saying: if this turns out to be a viable study that identifies a compound that could be cancerous, I guarantee you the tobacco industry on a very competitive basis is going to work like crazy to put out a product that removes that compound from cigarette smoke” ³⁰² .
Everything involves risk	A Philip Morris Position Statement On A Wide Range of Issues, produced, it is believed in 1996 for employees, says: “We acknowledge a statistical association between smoking and some human diseases. Most scientists would agree that statistical associations do not prove causation ... We acknowledge that smoking is a risk factor for some human diseases and we think that consumers should be aware of these potential risks; but we also believe that they are aware. There have been warning labels on each pack of cigarettes sold since 1966, and on all cigarette advertisements since 1971. Virtually every activity involves some potential risk, whether it be smoking, skiing, swimming, or driving a car. ANALOGY: The fact that an activity involves potential risk does not prove that it is a cause. Eating high-fat food is a risk factor for heart disease, but it may not be a cause of heart disease” ³⁰³ .
First company to admit health problems	1997: March: US tobacco company, Liggett, become the first US company to admit the health problems of smoking. “We at Liggett know and acknowledge that, as the Surgeon General and respected medical researchers have found, cigarette smoking causes health problems, including lung cancer, heart and vascular disease and emphysema.” ³⁰⁴ ”
No causal link	20 April: Paul Sadler, Manager for External Affairs at Imperial: “There is a statistical link between smoking and cancer, but no causal link has been proven” ³⁰⁵ .
Landmark deal	20 June: As part of the landmark deal in the US, the tobacco industry agrees to pay out \$368.5 billion over 25 years to pay for the costs of smoking related disease in 40 states that had sued the companies. After twenty five years, the industry will pay \$15 billion annually. “in order to get the \$368 billion, we need to keep people smoking.

	<p>This is the real paradox that's very troubling", says the Attorney General of Maryland. The settlement still has to be passed by Congress. As part of the settlement companies will have to put new labels on cigarettes, including "Cigarettes Cause Cancer" and "Smoking Can Kill You"³⁰⁶.</p>
People might have died	<p>22 August: Geoffrey Bible, CEO of Philip Morris, concedes that about 100,000 Americans "might have" died from diseases caused, at least in part, by smoking³⁰⁷.</p>
Might play a part	<p>23 August: Steven Goldstone, CEO of RJ Reynolds: "Rightly or wrongly, I have always believed that smoking plays a part in causing lung cancer. What that role is, I don't know, but I do believe it"³⁰⁸.</p>
	<p>26 August: The US tobacco companies agree to pay \$11.3 billion to the state of Florida in compensation for smoking related illnesses³⁰⁹.</p>
	<p>17 September: President Clinton announces that, although he endorses the \$368 billion settlement, and wants Congress to pass it into law, the draft agreement needs further working on³¹⁰.</p>
Common knowledge	<p>18 September: Ian Birks, Head of Corporate Affairs, Gallaher: "Of course Gallaher recognises that there are studies which indicate a statistical association between smoking and some diseases, such as lung cancer. That's common knowledge. Also we acknowledge that it is reasonable for public health authorities to conclude that smoking contributes in some degree to the incidence of lung cancer in smokers. Over the years Gallaher has co-operated with successive governments based on that presumption. Adult smokers are able to make an informed decision as to whether or not to smoke"³¹¹.</p>
The wrong research results?	<p>20 September: Dr. Gary Huber was the principal investigator in charge of the research program at Harvard University relating to smoking and health. The program was funded in part by a five-year grant, and a three-year extension of that grant, from the tobacco industry. He testifies in <i>The State of Texas v. American Tobacco Company, et. al.</i> US District Court, Eastern District of Texas.</p> <p>Q: "Now, Dr. Huber, do you believe, sir, that if you had been able to continue your experiments with rats with respect to the rats breathing smoke and developing emphysema, do you believe that you would have been able many years ago to have found the exact way that cigarette smoke causes emphysema"?</p> <p>A. "Yes"</p> <p>Q: "Why do you say that sir"?</p> <p>A. "We had important information on -- that was advancing science on the mechanisms by which these processes could occur".</p> <p>Q: "And you requested funding from the cigarette companies to continue it"?</p> <p>A. "Yes".</p> <p>Q: "It was not forthcoming"?</p> <p>A: "Correct"³¹².</p>

Plays a role	<p>1998:</p> <p>29 January: Appearing before the House Commerce Committee, the Chairman of RJR, Steven Gladstone, admits that smoking “plays a role in lung cancer ... When you sell a legal product with significant health risks, you should be co-operating with government not fighting it”³¹³.</p>
Strong statistical association	<p>Philip Morris’ Geoffrey Bible says: “We recognise that there is a substantial body of evidence which supports the judgement that cigarette smoking plays a causal role in the development of lung cancer and other diseases in smokers. We previously have acknowledged that the strong statistical association between smoking and certain diseases, such as lung cancer and emphysema, establishes that smoking is a risk factor for and, in fact, may be a cause of those diseases. For example, of all the risk factors for lung cancer that have been identified, none is more strongly associated with the disease, or carries a greater risk, than cigarette smoking; a far greater number of smokers than non-smokers develop lung cancer”³¹⁴.</p>
We were too confrontational	<p>29 January: Nick Brookes, Chairman and CEO of B&W testifies before the House Commerce Committee: “Even up to the late 1970s, the industry and the government made real efforts to cooperate on health issues ... I suspect that we probably would not need to be here today if our industry had done more to cooperate with public health authorities in the past ... Looking back, I believe that the industry - and B&W- was too confrontational. We should have tried harder to cooperate with the government and public health groups to solve problems rather than argue about them. I acknowledge that B&W contributed to this adversarial environment”³¹⁵.</p>
But it has never been established	<p>Jan /Feb: Murray Walker, Vice President and Chief Spokesperson for the Tobacco Institute, testifying at the Minnesota Trial: “We don't believe it's ever been established that smoking is the cause of disease.”³¹⁶</p>
I’m unclear	<p>3 March: Geoffrey Bible, Chairman of Philip Morris, testifies at the Minnesota trial: “I’m unclear in my own mind whether anyone dies of cigarette smoking-related diseases,”³¹⁷</p>
Evidence mounts	<p>11 March: The Report of the Scientific Committee on Tobacco and Health (SCOTH) is published: “Smoking is a major cause of illness and death from cardiovascular disease, chronic respiratory disease and cancer of the lung and other sites. It is the most important cause of premature death in developed countries and accounts for one fifth of all deaths in the UK: some 120,000 deaths a year. The avoidance of smoking would prevent one third of the deaths due to cancer in Britain and one sixth of the deaths from other causes”³¹⁸.</p>

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