

# Passive Smoking and “Denialism”: motives and strategies of denial of scientific evidence<sup>1</sup>

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## **abstract**

*The discussion about the health effects of passive smoking and tobacco control is marked by striking conflicts of interest. This concerns even the meaning and the significance of scientific consensus. In this discussion the notion of the so called “denialism” has been considered for some time. Denialism means the systematic challenging of scientific findings from a position tied to certain interests. This paper provides an introduction into the topic and attempts to clarify the reasons behind denialism in the area of passive smoking and ends with some conclusions on the subject matter.*

## **Key words**

*Passive smoking, smoking bans, tobacco industry*

Good political decision making needs on the one hand a good knowledge base of the matters of concern including reliable data, and on the other hand the striving for the best possible balance of interests of all the affected parties. Both of these premises are not always fulfilled to the desired degree. The scientific findings on health related consequences of passive smoking were of particular importance in the process of improving of the protection of non-smokers in Germany. Over the years findings from epidemiological as well as toxicological studies have accrued which demonstrate that second hand smoke is not just a nuisance for non-smokers, but can lead to serious damage to health. This is already true for the unborn, where maternal smoking during pregnancy can lead to preterm births or a higher risk of stillbirth. Parental smoking during childhood increases the risk of sudden infant death and many other childhood conditions, ranging from airway disease to psychological disorders like ADHD. Regarding adults, passive smoking is associated with an increased risk particularly of cancer, airways and cardiovascular disease (see <http://www.surgeongeneral.gov/library/secondhandsmoke/>). Some findings like the long term consequences of smoking during pregnancy on the cholesterol level of children eight years later on or the contribution of passive smoking to hearing loss or caries are still being debated. Nevertheless, the notion that passive smoking can do serious harm to health reaching as far as a statistically increased mortality is a well established fact today. Despite that, industry lobby groups and also some groups of smokers do not acknowledge the available evidence in the political debate on non-smoker protection. The debate around the body of evidence of the effects of passive smoking on health exhibits the typical mechanisms of belittling and denying scientific findings, which can also be found in other debates, such as on immunisations or homeopathy. Regarding the issue of passive smoking no societal consensus on the scientific evidence could be reached and used so far as a basis for the debate on appropriate political action to protect non-smokers. The battle lines are not drawn on

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the political implications of the existing evidence, but instead the scientific findings themselves are heavily contested amidst the conflict of interest of the various parties.

In this context, Diethelm/Mc Kee (2009) have recently used the phrase “denialism” with a view to the harmful effects of passive smoking. They draw upon Hoofnagle/Hoofnagle (without year) who used it in US American blogger debates in the context of the denial of anthropogenic effects on climate change. Diethelm/Mc Kee use the term “denialism” in the sense of a systematic denial and contest of the scientific evidence on a particular issue and put forward five central aspects of denialism (Diethelm/Mc Kee 2009: 2f):

- **Identification of conspiracies:** A scientific consensus is interpreted as conspiracy, e.g. by militant non-smokers, the pharmaceutical industry or the scientific establishment.
- **Fake experts:** Alleged experts are being cited, who support the own position, but are not really experts in that field.
- **Selectivity:** Only studies or experts are quoted, who are in support of the own position.
- **Impossible expectations:** Evidence is demanded at a level allowing no remaining uncertainties, which generally goes beyond the scope of scientific enquiry.
- **Misrepresentation and logical fallacies:** Misleading analogies and false logic are being used, for example when concluding that tobacco control policies have to be rejected because the National Socialists did use measures of tobacco control, too.

Denialism can be seen as an approach to deal with uncertainty. Evidence based medicine (EBM), for example, is another one. The logo of the Cochrane Collaboration, a stylised forest plot, symbolises the striving of EBM towards data based decision making despite an inconsistent body of evidence. The strategies behind denialism in dealing with uncertainty point into the opposite direction: EBM aims to minimise uncertainty by drawing together the whole body of evidence on a certain issue, denialism aims to enhance uncertainties through selective use of studies. EBM attempts to replace traditional opinions with a scientifically founded knowledge base, denialism aims to put apparent common sense against scientific findings. Where EBM aims to weight data and evidence higher than expert opinion, denialism relishes key witnesses.



Figure 1: Logo of the Cochrane Collaboration with stylised “forest plot” (Source: <http://www.cochrane.org>)

The strategies of the tobacco industry are at the centre of the paper of Diethelm/Mc Kee. It is well known and well documented that the tobacco industry has started very early on to systematically deconstruct unwanted scientific evidence (see for example Francey/Chapman 2000, Ong/Glantz 2001, Jazbinsek 2005, Malka/Gregori 2005, Grüning/Gilmore/McKee 2006, Bornhäuser/McCarthy/Glantz 2006, Grüning/Schönfeld 2007, Michaels 2008, Proctor/Schiebinger 2008, Hien/Helmert 2009, Kyriss/Schneider 2010, Oreskes/Conway 2010). Brandt (2012: 64) interprets these strategies even as a central element par excellence in the making of industrially driven conflicts of interest in medicine.

As early as 1953, shortly after animal experiments showing the carcinogenic effects of tobacco tar had been made public, managers of the big tobacco companies met with representatives of the public relations agency Hill & Knowlton in the Plaza Hotel in New York. The result of their discussions summarised Hill as “scientific doubts must remain” (Oreskes/Conway 2010:16). The strategy was not to confront science, but to emphasise discrepancies, remaining questions, differing positions, research gaps etc. Additionally, the tobacco industry would aim to fund fundamental research, e.g. on aspects of cancer far from its association with tobacco smoke. Thus, the scientific debate appeared still open and the tobacco industry left the impression of trying hard to contribute to the clarification of remaining questions. Beyond that, this strategy could exploit the journalistic tradition of balanced reporting in an especially perfidious way (Brandt 2012:67 f.). In this way science’s threat to industrial interests was neutralised, quite a few scientists were drawn to the side of the industry and used for industry’s interest. The organising forces behind these processes were in the United States for example the Tobacco Industry Research Committee (TIRC) and in Germany the “Forschungsrat Rauchen und Gesundheit” (research advisory body on smoking and health). The latter is today known as “VERUM - Stiftung für Verhalten und Umwelt” (“VERUM - foundation for behaviour and the environment”) and carries out research in the area of mobile communications. Another mile stone in the industry’s battle against science was “Operation Berkshire”, an agreement amongst the big tobacco companies in 1977 that included the industry’s approach to dealing with scientific findings on smoking (Francey/Chapmann 2000). Yet another step further was taken by Phillip Morris in the early 1990’s when Phillip Morris together with the law firm Shook, Hardy & Bacon formulated the “sound science strategy”. The intention of this strategy was to form an alliance with other regulated industries against the US Environmental Protection Agency (EPA) and the World Health Organisation (WHO). Focal action point of this alliance was to build up the accusation of bad science. The organisational framework was delivered by TASSC - The Advancement for Sound Science Coalition. One part of the coalition’s activities was the attempt to formulate own principles of “good epidemiological practice” and to influence the formulation of such principles by scientific bodies, respectively. (Ong/Glantz 2001). This means, that not only scientific findings were suppressed, scientists bought and science tampered with, but also the attempt was made to corrupt the scientific principles themselves. The reasoning behind that is trivial: the tobacco industry defends its field of business. The less social acceptance there is for smoking on scientific grounds, the more important are strategies of influence acting behind society’s back. Truth doesn’t matter anymore in this process.

Draft Radio News Release

**BAD SCIENCE LEADS TO BAD PUBLIC POLICY**

Concerned that the recent release of the **(local study center's)** findings on environmental tobacco smoke will cause what **(local public policy opinion leader, affiliation)** calls "hysteria-induced regulatory action," **(Mr./Ms. name)** warns that regulatory policies designed to protect public health must be based on sound science.

"Before rushing to judgment and introducing unwarranted smoking restrictions, policy makers are obligated to review all the available scientific evidence on environmental tobacco smoke. Otherwise, they risk basing their actions on ~~weak~~<sup>poor</sup> science, which only ~~diverts limited resources and attention away from potentially serious risks to public health.~~"

30/37 VAST MAJORITY ANAMOLY

**(He/she)** pointed out that the validity of the **(study center's)** study itself is still very much in question because it has not been subjected to independent scientific review or publication -- which is typical before any study can be considered credible. Of the studies that have been published, **(Mr./Ms. name)** said the vast majority have not shown an increased risk from exposure to environmental tobacco smoke.

"Our government should be careful not to repeat the mistakes of other countries. We must avoid needlessly overburdening the population with bad policies based on bad science." This is **(name)** reporting.

(Length)

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Figure 2: A template of the tobacco industry for a radio statement criticising unfavourable study results (Source: <http://legacy.library.ucsf.edu/tid/hgq27d00>)

Denialism, however, is not only a professionally planned strategy by public relation agencies and the industry. It can also serve as mindset of individuals in conflicts of interest. Denialism as individual mindset for everyday life implies that smokers confirm and support each other in their convictions and try and convince others, too. This can be seen in the case of passive smoking. The debate on potential negative health effects of passive smoking has virtually been taken to the regulars' tables in pubs. It is the smokers themselves who fight the scientific consensus in order to push their interests regarding a smoking ban in public spaces. The typical lines of argument, well known from the tobacco industry, can be found again here. Mirroring the criticism passed on the tobacco industry, namely its manipulation of science, smokers themselves now accuse the scientific evidence base regarding passive smoking to be "junk science", biased and falsified. As an illustrative example, the

“debate” with the technology philosopher Günter Ropohl can be referred to (Kuhn 2008, 2009). Smokers even employ the tobacco industry’s Sound Science Strategy, i.e. the attempt to dismiss studies on the health damage through passive smoking as bad science, which needs to be confronted by a better science (see Ong/Glantz 2001). On the web page <http://brusselsdeclaration.org> for example, there is a “declaration” of those fighting smoking bans, which claims to fight for scientific integrity. For the uninitiated reader, who is not aware of the history of science manipulation by the tobacco industry and of the sophisticated levels of argumentation in the philosophy of science, this declaration reads like a trustworthy list of quite reasonable scientific principles. The declaration’s only goal is, however, to win allies in the fight against regulative policies. From a scientific or a science philosophy perspective the declaration is worthless.

Denialism doesn’t only exist with a view to smoking. A simple Google search on the internet opens up a universe of denialistic themes and tendencies, reaching from anti-vaccination activists to those denying the evolution theory. Attempting to identify features which denialistic realms have in common, the following aspects stand out in particular:

- The topics refer to areas of fundamental beliefs and values (religion, political freedom etc.).
- Often, but not always, they are in close proximity to daily life and to people’s individual behaviour.
- The topics often, but again not always, are of relevance to industrial interests (reducing emissions, smoking bans etc.).
- Frequently denialism concerns issues on which a large number of studies exists, including “diverging” studies (similar to evidence based medicine, denialism is one approach to dealing with uncertainty, however, with the difference that in denialism the result is fixed up right from the beginning).
- The issues of concern often cannot be examined without employing scientific methods and the scientific evidence is not directly “visible” (like statistical results or microbiological agents for example).

Kahan et al (2011) examined the acceptance or denial of scientific facts in an empirical study (regarding climate change, deposition of nuclear waste and wearing of weapons) and found that the better a scientific consensus agrees with one’s values and beliefs the more it is accepted. This confirms the observation that denialistic structures develop in particular in these topic areas that concern fundamental beliefs. The defence of one’s own values and interests against the scientific consensus can turn into a kind of mission where like-minded people organise themselves and develop an identity of a “counter-public” that fights an almighty enemy. The internet plays an important role in establishing denialistic discourses just as radically liberal alliances and magazines do, which pursue anti-regulatory politics on principle. Consequently, a group identity develops with a clear friend or foe distinction: those, who criticise, do so because they belong to the “other side”. Therefore their criticism doesn’t need to be taken seriously from the outset. Against that background, the often ritualised dispute with other positions in internet forums does not serve the clarification and interpretation of facts, which would imply the preparedness to question the own point of view. Rather, it represents a group dynamical process of self-assurance and self-affirmation: people demonstrate to themselves and to their own peer group that they stand on the “right side”, that they

are prepared to offensively stand up for their cause and that they will not be led astray by objections and facts put forward by the “other side”.

An unclear body of evidence furthers denialistic developments, too. Even though there is no real doubt anymore on the health damaging nature of passive smoking, several single findings don't have a good evidence base. Beyond that, the quantification of effects, like for example the statistical increase in mortality, can always be debated even if the underlying mechanisms are well evidenced. All in all the available evidence is in part inconsistent, in some parts weak and beyond that there are studies that are motivated by the interests of one group or the other. The sheer extent of available information tends to rather confuse than give orientation, similar to the information situation on the new variant of the H1N1 flue in 2009. The crystallisation of knowledge out of this information overload crucially depends on an active striving for knowledge as well as on a minimum level of health literacy, meaning the ability to competently deal with health information. The “cultural cognition of scientific consensus”, as described by Kahan et al., proves to be a critical hurdle in that process.

From a psychological background, denialism in its appearance as a mindset for daily life can be interpreted as an approach to dealing with conflicts in those areas of live which are important for an individual's identity and capability to act, respectively. For example, if someone doesn't want to abstain from smoking in pubs but also doesn't want to be accused of knowingly damaging other guests' health, then a possible solution to that dilemma is to ignore or to belittle findings on the negative health effects of passive smoking. Instead of accepting these findings, these people selectively look out for confirmation of their own position, gain self-confidence from understanding themselves as “the underdog fighting the mainstream” and receive support of like-minded peers, e.g. in internet forums. Beyond that, there is a possibility that denialism may also be motivated by more general critical attitudes towards medicine and a distrust of biopolitical interference by governments with people's daily life. These aspects, which have to be taken seriously in their own right, have already been discussed elsewhere (Kuhn 2009).

Whilst there is a lot of material on the denialism strategies of the tobacco industry, there has been little research on denialism as a mindset for everyday life so far. It is neither known how the tobacco industry and denialistic mindsets of everyday live relate to each other nor do we know the effects denialistic internet forums and magazines have on third parties (e.g. people looking for information) or how the political system reacts to denialistic groups, e.g. in pre-election periods. Research on these questions, however, is needed, not least with a view to the health policy implications of this issue. Prevention in the sense of political intervention regarding constellations of risk and people's lifestyles always needs to be legitimised. The underlying issue is what the society should look like in which we all live and have to live together. This implies that a certain balance needs to be struck between competing interests. It cannot be expected that this balance can be reached without conflict. The decision process, however, on which risks can be accepted and which cannot, is the more likely to be successful the better evidence and opinion can be kept apart. Then the scientific knowledge base does not determine the decision, but should play a relevant role. In contrast, conflict solutions by civil society are hampered considerably when political debates are contaminated by denialistic arguments. This is also particularly true, when political decisions are legitimised

through direct democracy, for example in the form of a referendum or initiative. Only those with correct information can make a good decision and know which risks they potentially accept for themselves or impose on others. Denialism destroys the very preconditions for the best possible and really autonomous decisions by people on those issues that matter to them.

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