Scientific Evidence and Policy Learning

Scientific evidence plays an important role in the policymaking process. Facts about the seriousness of a problem need to be accepted before a problem will be fully addressed, and evidence needs to be available for policymakers to decide about solutions. The Netherlands is among those countries where an evidence-based public health policy is best developed (CHRODIS, 2015; Smith, 2013, p. 4). When the evidence-based movement in public policy reached its apotheosis in the United Kingdom in 1997, with the new Labour government declaring "what matters is what works" (Davies, Nutley, & Smith, 2000), this was already common in the Netherlands. However, sometimes the call for more evidence may paralyse the policy process. There are also limits to the power of evidence. While a prerequisite for current policymaking in the field of public health is that important policy choices are "evidence based," in practice this often means that policy is at best "evidence informed" (Slob & Staman, 2012).

Political scientists make a distinction between ambiguity and uncertainty (Cairney & Oliver, 2017; Cairney, Oliver, & Wellstead, 2016; Majone, 1992; Zahariadis, 2007, pp. 66–67). When considering policy options, ambiguity refers to a state of ambivalence: there are various ways of thinking about an issue (efficacious, moral, ideological, economic) leading to confusion about what to do. This is different from uncertainty. Uncertainty refers to inadequate knowledge and precision to determine whether something is likely to work or not, or about what the exact

magnitude of a problem is. Scientists and research institutes regard their role primarily as a source of uncertainty reduction, producing evidence about the size of a problem and the effectiveness and cost-effectiveness of policy options. Collecting more data will reduce uncertainty but not necessarily ambiguity. Ambiguity is resolved by argument. The process of agenda setting (discussed in Chap. 10) is primarily about resolving ambiguity through issue framing: drawing attention to one specific way of perceiving the problem so that policymakers feel more comfortable with a solution. Even in the field of tobacco control, which is widely regarded as a field with abundant scientific evidence—and there are many examples where scientific evidence has played a key role in policy debates—merely producing evidence with scientific rigour is not enough. International experts ranked the availability of scientific evidence as "having had a 'substantial' impact on the adoption of clean indoor air policy, taxation and cessation treatment policy, and a 'modest' effect on all of the other policy areas" (Warner & Tam, 2012). Advocates need to find ways to combine the scientific evidence with effective messages that appeal to policymakers (American Cancer Society, 2003).

This chapter takes a closer look at how the Dutch government responded to scientific facts about the health risks associated with active and passive smoking. It describes how and when the health risk definitely became accepted as "scientific fact" by the government. This happened somewhat later in the Netherlands than in leading countries. Attention will be paid to the diffusion of ideas and knowledge, from the international tobacco control community to the national setting. Since tobacco control policy does not automatically follow best evidence, I also explore the mediating role of ideology on knowledge diffusion and emulation.[1]

Evidence About the Risks of Smoking

The Dutch Health Council noted already in 1957 that lung cancer rates had increased to an alarmingly high level and that this was associated with smoking (Wester, 1957). However, the members of the council could not reach consensus about whether the association was causal, and "from a psychological standpoint, focusing too much on a possible causal relation between smoking and lung cancer has great disadvantages." Following advice from the council, the government made an official warning through the media to young people not to smoke, but phrased in a way that would not distress older, addicted smokers. The government responded to the

Health Council's advice by instructing a second Health Council committee to make a plan for *how* youth should be approached, and some general warnings through the media (Bouma, 2001). The passive Dutch governmental response was in contrast to the US government, which quickly mandated warning labels on cigarettes and initiated a ban on broadcasting cigarette advertisements.

When a new compelling report from the UK Royal College of Physicians came out in 1971, this was quickly translated and widely distributed in the Netherlands by the Dutch Cancer Society (Meinsma, 1972). However, while in the United Kingdom health warnings appeared on cigarette packs in 1971 and the government allowed their health education committee to run explicit media campaigns to confront the public with the devastating harm that smoking inflicts, the Dutch government needed more than ten years of further study and deliberation before cigarette packs were provided with health warnings.[2] Media awareness campaigns showing the health damage to smokers did not appear in the Netherlands.

Instead of taking action, State Secretary for Health Roelof Kruisinga commissioned the Health Council to write a new (the third one) report, this time on how to address the tobacco problem. The report (discussed in Chap. 2) called for an integrative set of policy measures (Beernink & Plokker, 1975). However, the report was not as outspoken about the gravity of the risks of smoking as US and UK reports. The council estimated that smoking causes about 12,000 deaths per year, but it did not elaborate on specific health damages (Beernink & Plokker, 1975). The section discussing the evidence about health consequences was barely more than four pages long. The subsequent report by the *Interdepartementale Commissie Beperking Tabaksgebruik* (Interdepartmental Committee for Reducing Tobacco Use) (ICBT) (discussed in Chap. 2), issued to formulate proposals for regulative measures, was even more vague: "the starting point for the commission has been that, based on scientific studies, it is certain that the use of tobacco products, particularly cigarettes and roll-your-own tobacco, has a harmful effect on the health of the user" (ICBT, 1981). Both the ICBT report and the Health Council report noted that the effects depended on factors such as number of cigarettes smoked per day, the choice of tobacco, use of filters, way of smoking, and number of years of smoking. Mainstream thinking about smoking in these years, even among Dutch academics, was that it was possible to smoke "sensibly," (Drogendijk, 1978). In an interview in 1999, Borst said that the Health

Council should have sent out a more powerful message about the health risks of smoking between 1956 and 1975 (Bouma, 1999). With some understatement, she remarked about the late introduction of the health warnings that "a little late might … be defendable, but much later is not very nice."

Debates About Second-Hand Smoke

At the end of the 1970s the government contemplated the need to protect non-smokers from exposure to tobacco smoke. The main motive was to accommodate the wishes of non-smokers; health concerns did not yet play a role.[3] There was considerable disagreement about the seriousness of health risks for non-smokers. Dutch Cancer Society's director Lenze Meinsma, the main health activist at the time, did not believe that the risks of environmental tobacco smoke (ETS) were important enough for government interference. In the 1980s the government regarded passive smoking as problematic because it caused hindrance and discomfort. Complaining non-smokers could suffer social isolation or conflict at work, while vulnerable groups like babies and asthma patients might suffer from direct exposure.[4]

The year 1986 is generally regarded as the year that the public perception of second-hand smoke risks changed worldwide. Two reports from the United States presented comprehensive and authoritative scientific accounts of the health risks (National Research Council, 1986; US Surgeon General, 1986). In addition, the WHO-affiliated International Agency for Research on Cancer concluded that "passive smoking gives rise to some risk of cancer" (IARC, 1986). In an effort to estimate the health risks for the Dutch population, State Secretary for Health Dick Dees ordered the Health Council in 1989 to critically examine the existing international scientific evidence, taking the international reports as their starting point. The Dutch Health Council reviewed the reports and concluded that it was very likely that prolonged exposure to ETS increased the risk of lung cancer (Gezondheidsraad, 1990). However, the report was more restrained than the US reports. The Surgeon General Report's major conclusion that "involuntary smoking is a cause of disease, including lung cancer, in healthy non-smokers" (US Surgeon General, 1986) was re-formulated by the Dutch Health Council as "it is likely that long-term exposure to tobacco smoke may increase the lung cancer risk of non-smokers," emphasising that the increase "could be partly due to flaws in the design of the epidemiological studies." Although the US National

Research Council experts did recognise misclassification problems and methodological difficulties in estimating the number of cancer cases, they felt confident enough to conclude from the evidence that about 21% of the lung cancers in non-smoking women and 20% in non-smoking men were attributable to exposure to tobacco smoke (National Research Council, 1986). The Dutch Health Council was more cautious and concluded that a quantitative estimation of the risk was not possible.

In the 1980s the evidence about the health consequences of prolonged exposure to second-hand smoke were thus less definitive in the Netherlands than in the United States. The Dutch tobacco control health network realised that the issue of involuntary smoking was key to getting public and political support for stronger tobacco control. The *Stichting Volksgezondheid en Roken* (Dutch Smoking or Health Foundation) (STIVORO), on behalf of the three charities which sat on their board and with support from the ministry, started campaigns to educate the public about the risks. This brought STIVORO into direct conflict with the industry, which continued to cast doubt on the established scientific knowledge (see Chap. 9).

In 1992, a report from the US Environmental Protection Agency declared tobacco smoke a human carcinogen, and concluded that second-hand smoke is a cause of lung cancer in non-smoking adults (EPA, 1992). Epidemiologists from the Dutch Cancer Institute estimated, based on the US Environmental Protection Agency (EPA) report, that in the Netherlands each year between 110 and 270 people died because of exposure to ETS (Jansen, Van Barneveld, & Van Leeuwen, 1993). When the EPA's conclusions about the causal effect of exposure to ETS and lung cancer were attacked by the tobacco industry through a high-profile advertising and public relations campaign (Oreskes & Conway, 2010), the EPA quickly set the record straight with a decisive rebuttal (EPA, 1994). Despite the endorsement of the EPA for the conclusions of the Dutch scientists, it took another ten years before the Dutch Health Council felt confident enough to quantify the risk.

Involuntary smoking continued to be the subject of debate, ignited by tobacco industry think tanks, smokers' rights groups, and industry-sponsored scientists. Surveys among Dutch employees in 1993 found that only 49% of non-smokers and 25% of smokers believed that non-smokers had more chance of getting cancer because of exposure to tobacco smoke in the workplace (Willemsen, De Vries, & Genders, 1996). In the United Kingdom the matter was more or less settled in 1998 with a meta-analysis

of the evidence by the Scientific Committee on Tobacco and Health (SCOTH, 1998). In 1996 researchers commissioned by Philip Morris reviewed the available evidence from industry-led studies worldwide about public perceptions of the risks of environmental tobacco smoke. They reported that the belief that ETS was "a serious health risk" was lowest in the Netherlands (21% agreed), compared with other European countries surveyed (e.g., Germany 30%, Ireland 30%, the United Kingdom 42%, France 52%, and Italy 53%) (Philip Morris, 1996).

The Dutch Health Council finally concluded in 2003 that exposure to ETS increased the risk of lung cancer by 20%, resulting in "several hundreds of lung cancer deaths" per year and an additional "several thousands" of deaths as a result of heart disease (Gezondheidsraad, 2003). This was more than 15 years after US reports had come to similar conclusions.

THE EVIDENCE BASE FOR TOBACCO CONTROL POLICY

Nowadays international scientific knowledge about what works best to reduce smoking, and *how* it works, is immense. Hoffman and Toan (2015), in a review of reviews, identified 59 systematic reviews covering 1150 primary studies of the likely population impact of measures that are part of the Framework Convention of Tobacco Control (FCTC). Evidence was most robust for the effect of smoking bans (they improve population health outcomes through reduced exposure to tobacco smoke, and reduced smoking) and raising tobacco prices (they decrease cigarette consumption, stimulate smoking cessation, and lower population smoking rates). Increasing the price of tobacco was by far the most effective policy instrument to reduce tobacco consumption (Chaloupka, Straif, & Leon, 2011; Chaloupka, Yurekli, & Fong, 2012; IARC, 2011). Positive results were also found for health warnings on cigarette packs and mass media campaigns, which are most effective as part of larger multicomponent programmes (Hoffman & Toan, 2015). Far more studies have been done on the effects of anti-tobacco media campaigns than on any other health-related topic, so that the evidence base is exceptionally strong (Wakefield, Loken, & Hornik, 2010). The US National Cancer Institute made an extensive review of the scientific literature and identified no less than 25 controlled field experiments with youth media campaigns, 40 with adult targeted campaigns, and 57 population-based state/national mass media campaigns (National Cancer Institute, 2008). Carefully planned and

sustained mass media campaigns can change smoking behaviour across large populations (Bala, Strzeszynski, Topor-Madry, & Cahill, 2013; Sims et al., 2014; Wakefield et al., 2010), provided they are adequately budgeted (Durkin, Brennan, & Wakefield, 2012). However, the Dutch government did not invest in national media campaigns to raise awareness of the health consequences of smoking (see Box 7.1). Evidence for advertising bans is less conclusive, but strong enough to conclude that they remain important.

WHO officials and experts who collaborated in drafting the FCTC took as their starting point that the treaty must be evidence-based and follow best practices from leading countries (WHO, 2003; World Bank, 1999). Most of the treaty's articles are grounded on a well-developed evidence base (Warner & Tam, 2012). The main tobacco control building blocks for the global treaty were already laid out in a report from a WHO expert committee in 1979 (WHO, 1979) and were fine-tuned in subsequent WHO reports (Roemer, 1982; WHO, 1998, 2004a, 2004b), substantiated by scientific evidence collated in reports from the US government (CDC, 1999; IOM (Institute of Medicine), 2007; U.S. Department of Health and Human Services, 2000).

WHO understood very early that governments need support and encouragement to implement FCTC measures. One of the strategies was the promotion of "MPOWER," a user-friendly way to single out and bring the six most important "proven policies" to the attention of policymakers (WHO, 2008). These are monitoring smoking and prevention policies (M), protecting people from second-hand smoke (P), offering help to people who want to quit (O), warning about the dangers of tobacco (W), enforcing bans on advertising (E), and raising taxes (R). The MPOWER package was brought to the attention of Dutch politicians and policymakers in 2010 (STIVORO, 2010).

Box 7.1 Confrontational media campaigns to deter smoking
For long, Dutch officials have been sceptical about the ability of media campaigns to influence health behaviour. Scepticism can be traced to a critical report from the Dutch Court of Audit in 1991 that concluded that most government media campaigns were conducted without proper evaluation so that effects were not demonstrable or

negligible (Algemene Rekenkamer, 1991). Parliament demanded immediate cuts in government spending on campaigns and a more critical reflection about their use to influence unhealthy lifestyle. Despite improvements in the general quality of campaign designs, the Health Council concluded 15 years later that mass media campaigns "have, at best, only a modest effect on behaviour," although it was acknowledged that they can be important as part of comprehensive approaches (Gezondheidsraad, 2006).

Tobacco risk awareness campaigns are seen by some as "fear mongering." Ten years ago, the Dutch Health Council advised that fear appeals were not an effective means to influence behaviour and should therefore be avoided (Gezondheidsraad, 2006). There was some debate among Dutch researchers from different scientific backgrounds about the usefulness of this type of campaign for tobacco control (Ruiter & Kok, 2006; Van der Kemp & Bekker, 2007; Zeeman, Willemsen, & van Gennip, 2007). Researchers from different scientific backgrounds may reach different but equally legitimate conclusions when they study the same phenomenon (Sarewitz, 2004), but when this happens, it makes it more difficult for policymakers to reach a decision.

The International Tobacco Control Epistemic Community

The spread of knowledge from one country to another is facilitated and accelerated by "epistemic communities," "networks of professionals with recognised expertise and competence in a particular domain and an authoritative claim to policy relevant knowledge within that domain" (Stronks, van de Mheen, Looman, & Mackenbach, 1997). In the past 50 years, a worldwide tobacco control network has emerged. Its members share a common understanding of the science base for effective tobacco control, shaped after years of interaction and participation in scientific debates about the best way forward (Mamudu, Gonzalez, & Glantz, 2011). A study based on interviews with 181 members from 39 countries between 1999 and 2006 revealed that the international tobacco control network consists of four types of actors: scientists who are also

advocates; pure advocates; pure scientists; and expert government officials (Mamudu et al., 2011). To a large extent, they share a "consensual knowledge" about what works best in tobacco control: for example, they view tobacco control as a public health issue, regard tobacco use as an addiction, recognise the strength of the tobacco industry lobby, and advocate a comprehensive approach to tobacco control. This epistemic community is linked through e-mail networks, social media, conferences, international research projects, and international non-governmental organisations, and is dominated by experts from the United States, Australia, and the United Kingdom. Dutch experts play a role, through collaborations with international research networks, such as through the International Tobacco Control (ITC) Policy Evaluation Project (ITC Project, 2015).

The Netherlands is an open country, with one of the highest levels of inhabitants speaking English as a second language. Dutch policymakers are more steered by international developments than politicians in large autarkic societies like the United States, the United Kingdom, Germany, and France. There are few barriers in the Netherlands to prevent the quick diffusion of new ideas and evidence from abroad to policymakers. The process of policies spreading from one government to another is known as "policy diffusion" (Graham, Shipan, & Volden, 2012): when a policy has been proven effective in one country, others learn from its success and adaptation may follow. Policy diffusion can be better understood if we again consider the concept of a "family of nations" (discussed in Chap. 5). The Netherlands belongs to a group of Western-European "continental" countries including Belgium, Germany, and Austria: countries that share similar cultural values and political arrangements. This means that Dutch politicians and policymakers are more likely to look at best practices from these countries and might be sceptical of examples from other families of nations. For example, Health Minister Klink was known to get ideas about tobacco control from German newspapers and magazines. Dutch government officials indeed seem most comfortable looking for best practices within Europe, since tobacco control has more and more become a European Union (EU) affair and the civil servants working in tobacco control meet frequently with their European colleagues (see Chap. 6). Civil servants from the Ministry of Health learn from their colleagues from other European countries at regular, sometimes monthly, meetings in Brussels where they prepare and discuss tobacco legislation. During meetings, European countries look up to countries that are most active

during discussions and have most knowledge to share. The Netherlands is in this active group, as are the United Kingdom, France, Belgium, and Scandinavian countries.[5] While the government orients towards European tobacco control, national tobacco control advocacy organisations often look for wider inspiration, particularly to the English-speaking countries which dominate the global tobacco control epistemic community (the United Kingdom, Australia, the United States), sometimes ignoring the fact that these countries have different tobacco control environments and institutional arrangements and might not share the same cultural values.

A second important source for the government is through national knowledge "broker" organisations. These are governmental or semi-governmental expert centres and scientific advisory boards, tasked with producing scientific evidence on which to base policy. It has been shown that the existence of national organisations for scientific knowledge brokering facilitate the uptake of evidence by policymakers (Liverani, Hawkins, & Parkhurst, 2013). In the Netherlands, the *Rijksinstituut voor Volksgezondheid en Milieu* (National Institute for Public Health and the Environment) (RIVM) and the Netherlands Expertise Center for Tobacco Control (NET) at the Trimbos Institute are currently important knowledge brokers for the government on tobacco control policy. The RIVM provides expertise and advice on risks of existing and novel tobacco products, estimates the population impact of measures, and does cost-benefit analyses. The Trimbos Institute's NET reviews the effectiveness of tobacco control measures and monitors national smoking prevalence rates.

Nowadays the EU is an important driver of tobacco control policy convergence and a source of policy learning (see also Chap. 6). Policy learning between tobacco control advocacy groups within Europe takes place through various European tobacco control organisations. The most important ones are the SFP (Smoke Free Partnership), ENSP (European Network of Smoking Prevention), the EHN (European Heart Network), and the ECL (the Association of European Cancer Leagues). Over the years the three Dutch charities (Cancer Society, Heart Foundation, Lung Foundation) built lasting contacts with these groups and organisations. The absorption of tobacco control policy knowledge is further facilitated through the World Conferences on Tobacco or Health (WCToH) and their European equivalents (ECToH). STIVORO and Dutch civil servants from the Ministry of Health visited these international tobacco control conferences, but it is unusual for high-level Dutch government officials,

let alone ministers, to attend. One exception occurred in 1983 when State Secretary for Health Joop van der Reijden made a personal visit to the fifth World Conference on Tobacco or Health in Winnipeg, Canada, accompanied by STIVORO's director.

Science and Ideology

Rigorous science is crucial for the establishment of effective tobacco control policy. Simply put, policy that is based on incomplete, incorrect, or bad science is not likely to be effective. However, it is seldom that a new research finding directly alters the way policymakers approach a problem such as tobacco. Rather, according to some scholars, research findings influence policy through a slow process where knowledge eventually filters into policymakers' decisions, a process which has been called "knowledge creep" or "percolation" (Radaelli, 1995; Weiss, 1980). Research findings cumulatively build towards a solid knowledge base, which policymakers use to legitimise their decisions.

For policy change to come about, the science to support the policy must be available the moment that an issue is discussed as part of the policymaking agenda (Schwartz & Rosen, 2004). It is important to understand that evidence is more likely to be used when it informs policymakers about *how* to implement something, rather than whether they *should* (Schwartz & Rosen, 2004). The latter type of decision more likely reflects political preferences (Liverani et al., 2013; Warner & Tam, 2012). As one ex-civil servant explained to me, "Research can never replace policy."[6]

Ideological preferences are likely to determine what policy solutions are selected. Paul Huijts, director-general at the Ministry of Health, said:

> The Health Council does not consider the societal acceptance of a measure in her advice. Of course the ministry has to take that into account. When we expect much resistance against a measure, this can mean that we will not implement that measure—despite the fact that implementation would be scientifically rational. (Slob & Staman, 2012)

He added, "Sometimes a scientific standpoint can clash with the political responsibility that a minister feels."

Ideological differences in the Netherlands tend to centre around three issues. First, whether the government believes that it is able to make the

best choices for its citizens—believe in a modifiable society versus regarding state interference as paternalism. Second, whether the government believes that it is always best to start from the notion of own responsibility, respecting citizens' freedom of choice. Thirdly, the importance the government attaches to solidarity between demographic groups. These preferences are explicitly mentioned in an influential Dutch advisory report as the appropriate starting point for the government when it must choose between policy instruments (Werkgroep IBO Gezonde leefstijl, 2016). The first step is to identify which measures have proven effectiveness; the second to select from those the ones that best satisfy the ideological preferences.

Sometimes bureaucrats use evidence for strategic purposes. Seeking advice from an official expertise centre or advisory board is a political act in itself: it signals that the issue at hand is under consideration. It is revealing that the last time the government asked for an official expert's advice about tobacco control was in 1998 (Roscam Abbing, 1998) and it was a report by the Netherlands School of Public Health (NSPH) which became the bedrock on which the revised Tobacco Act was built. Another strategic motive is that policymakers need evidence to show that they have selected the best policy solution. One study from the United Kingdom interviewed policymakers and found that many are sceptical about the importance of research such as systematic literature reviews, impact assessments and health impact modelling to inform policy selection (Stewart & Smith, 2015). Many regard the usefulness of research more for its symbolic value: as a sign of good decision-making, and as a tool to convince proponents and the public that the chosen policy is sensible and responsible.

The role of ideology was particularly evident during the first years that Minister Schippers (2010–2012) was responsible for tobacco control. She consistently used libertarian arguments to underscore that tobacco control is not an issue that the government should be concerned with. When ideological considerations dominate, fact-free politics is often the result. She said in her maiden speech to parliament in 2010, when talking about tobacco control policy, "We are politicians. We are no technocrats who say: this is a list of measures which work best, so this is what we will do automatically. You might then just as well leave it up to a computer."[7] Schippers decided against prevailing evidence and dismantled much of the tobacco control infrastructure.

Conclusion

From the start, Dutch tobacco control policy lacked strong governmental commitment and firm backing by scientific authorities. Reports by the Health Council were hesitant and vague about the dangers of active smoking, despite the availability of alarming authoritative reports from the United States and the United Kingdom, which were very explicit about health risks. The government left it to civil organisations such as the Dutch Cancer Society to communicate about health risks, but these organisations were not in a position to put the issue convincingly on the societal and political agenda, as the government would have been. This has probably contributed to the slow start of the process of tobacco control policy making, relative to other European countries, as concluded in Chap. 3, which examined the tempo of tobacco control efforts in the Netherlands.

Commissioned experts from the Health Council were slow in processing the international body of knowledge about the health risks of second-hand smoke and came to more cautious conclusions than US experts. Disbelief about the health risks of passive smoking was reinforced by targeted actions by the tobacco industry to cast doubt on the science behind the claim that passive smoking causes serious disease and death. This might have contributed to a delay in the adoption of smoking bans—but this was not unique to the Netherlands. The United States and the United Kingdom, where the most authoritative and influential reports were produced, also witnessed a substantial lag between the time that the scientific knowledge on second-hand smoke was "set in stone" at the beginning of the 1990s and the time that the first comprehensive smoking bans were implemented. This was 1995 in California and early to mid-2000s for most other US states, and 2007 in the United Kingdom (two years later than in the Netherlands). Years after the international scientific community had reached consensus, press coverage in most countries continued to proclaim that the research was controversial, quoting industry spokespersons who criticised the epidemiological methodology.

Being from an open country with English as a second language, Dutch tobacco control groups are well connected with the international tobacco control community, dominated by English-speaking countries, particularly the United States, the United Kingdom, and Australia. Dutch government officials tend to look for best practice examples in Europe, as tobacco control is increasingly decided in Brussels. The Dutch govern-

ment has ample access to information on what works best, including data from semi-governmental expert centres such as the RIVM and the Trimbos Institute. The general level of knowledge about tobacco control policy options is high, but health ministers tend to base their policy choices on political considerations, sometimes disregarding evidence about what is most efficacious and cost-effective. Considerations of deregulation, decentralisation, and budget control are competing issues, and at times more important.

Notes

1. Emulation may be defined as "borrowing ideas and adapting policy approaches, tools or structures to local conditions" (Stone, 2001).
2. This happened in 1982.
3. Proceedings II, 1977–1978, 14,800, hoofdstuk XVII, nr. 34.
4. Proceedings II, Tabakswet 23 juni 1987, 90–4570.
5. Interview, 29 October 2015.
6. Interview, 1 February 2017.
7. Proceedings II, Preventieve gezondheidsprojecten 28 October 2010, 15–14.

References

Algemene Rekenkamer. (1991). *Voorlichtingscampagnes van het Rijk*. Den Haag: SDU.

American Cancer Society. (2003). *Tobacco control strategy planning guide #1. Strategy planning for tobacco control advocacy*. Atlanta, GA: American Cancer Society.

Bala, M. M., Strzeszynski, L., Topor-Madry, R., & Cahill, K. (2013). Mass media interventions for smoking cessation in adults. *Cochrane Database of Systematic Reviews, 6*, CD004704.

Beernink, J. F., & Plokker, J. H. (1975). Maatregelen tot beperking van het roken. Advies van de Gezondheidsraad. *Verslagen, Adviezen, Rapporten* (Vol. 23). Leidschendam: Ministerie van Volksgezondheid en Milieuhygiëne.

Bouma, J. (1999). De overheid werd te laat actief. *Trouw*.

Bouma, J. (2001). *Het rookgordijn: De macht van de Nederlandse tabaksindustrie*. Amsterdam: Veen.

Cairney, P., & Oliver, K. (2017). Evidence-based policymaking is not like evidence-based medicine, so how far should you go to bridge the divide between evidence and policy? *Health Research Policy and Systems, 15*, 35. https://doi.org/10.1186/s12961-017-0192-x

Cairney, P., Oliver, K., & Wellstead, A. (2016). To bridge the divide between evidence and policy: Reduce ambiguity as much as uncertainty. *Public Administration Review, 76*, 399–402.

CDC. (1999). *Best practices for comprehensive tobacco control programs.* Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health.

Chaloupka, F. J., Straif, K., & Leon, M. E. (2011). Effectiveness of tax and price policies in tobacco control. *Tobacco Control, 20*(3), 235–238. https://doi.org/10.1136/tc.2010.039982

Chaloupka, F. J., Yurekli, A., & Fong, G. T. (2012). Tobacco taxes as a tobacco control strategy. *Tobacco Control, 21*(2), 172–180. https://doi.org/10.1136/tobaccocontrol-2011-050417

CHRODIS. (2015). *Health promotion and primary prevention in 14 European countries: A comparative overview of key policies, approaches, gaps and needs.* Brussels: CHRODIS.

Davies, H. T. O., Nutley, S., & Smith, P. C. (Eds.). (2000). *What works? Evidence-based policy and practice in public services.* Bristol: The Policy Press.

Drogendijk, A. C. (1978). *Verstandig roken.* Amsterdam: Buijten & Schipperheijn.

Durkin, S., Brennan, E., & Wakefield, M. (2012). Mass media campaigns to promote smoking cessation among adults: An integrative review. *Tobacco Control, 21*(2), 127–138. https://doi.org/10.1136/tobaccocontrol-2011-050345

EPA. (1992). *Respiratory health effects of passive smoking (also known as exposure to secondhand smoke or Environmental Tobacco Smoke—ETS).* Washington, DC: U.S. Environmental Protection Agency (EPA).

EPA. (1994). *Setting the record straight: Secondhand smoke is a preventable health risk.* Washington, DC: U.S. Environmental Protection Agency (EPA).

Gezondheidsraad. (1990). *Passief roken: Beoordeling van de schadelijkheid van omgevingstabaksrook voor de gezondheid.* Den Haag: Gezondheidsraad.

Gezondheidsraad. (2003). *Volksgezondheidsschade door passief roken.* Den Haag: Gezondheidsraad.

Gezondheidsraad. (2006). *Plan de campagne: Bevordering van gezond gedrag door massamediale voorlichting.* The Hague: Health Council of the Netherlands.

Graham, E. R., Shipan, C. R., & Volden, C. (2012). The diffusion of policy diffusion research in political science. *British Journal of Political Science, 43*(3), 673–701. https://doi.org/10.1017/S0007123412000415

Hoffman, S. J., & Toan, C. (2015). Overview of systematic reviews on the health-related effects of government tobacco control policies. *BMC Public Health, 15*, 744.

IARC. (1986). Tobacco smoking. IARC monographs on the evaluation of carcinogenic risks of chemicals to humans. In *IARC monographs no 38* (Vol. 38). Lyon: International Agency for Research on Cancer (IARC).

IARC. (2011). *Effectiveness of tax and price policies for tobacco control. IARC handbooks of cancer prevention: Tobacco control* (Vol. 14). Lyon: International Agency for Research on Cancer (IARC).

ICBT. (1981). *Advies inzake maatregelen ter beperking van het tabaksgebruik.* Den Haag: Interdepartementale Commissie Beperking Tabaksgebruik (ICBT), Ministerie van Volksgezondheid en Milieu.

IOM (Institute of Medicine). (2007). *Ending the tobacco problem: A blue-print for the nation.* Washington, DC: The National Academies Press.

ITC Project. (2015). ITC Netherlands National Report. Findings from the Wave 1 to 8 Surveys (2008–2014). Waterloo, ON, Canada: University of Waterloo.

Jansen, D. F., Van Barneveld, T. A., & Van Leeuwen, F. E. (1993). *Passief roken en longkanker: Het EPA rapport.* Amsterdam: Nederlands Kanker Instituut.

Liverani, M., Hawkins, B., & Parkhurst, J. O. (2013). Political and institutional influences on the use of evidence in Public Health Policy. A systematic review. *PLoS One, 8*(10), e77404. https://doi.org/10.1371/journal.pone.0077404

Majone, G. (1992). *Evidence, argument, and persuasion in the policy process.* New Haven, CT: Yale University Press.

Mamudu, H., Gonzalez, M., & Glantz, S. (2011). The nature, scope, and development of the global tobacco control epistemic community. *American Journal of Public Health, 101*(11), 2044–2054. https://doi.org/10.2105/AJPH.2011.300303

Meinsma, L. (1972). *Roken en gezondheid nu: Een nieuw rapport en samenvatting over het roken en de gevolgen daarvan voor de gezondheid van het Royal College of Physicians te London.* Naarden: Strengholt.

National Cancer Institute. (2008). *The role of the media in promoting and reducing tobacco use.* NCI tobacco control monograph series (Vol. 19).

National Research Council. (1986). *Environmental tobacco smoke: Measuring exposure and assessing health effects.* Washington, DC: National Academy Press.

Oreskes, N., & Conway, E. M. (2010). *Merchants of doubt: How a handful of scientists obscured the truth on issues from tobacco smoke to global warning.* New York: Bloomsbury Press.

Philip Morris. (1996). Corporate Affairs 1996/1997 The Netherlands. *Philip Morris Records*, Bates No. 2501076006–2501076023. Retrieved from https://www.industrydocumentslibrary.ucsf.edu/tobacco/docs/nzjl0112

Radaelli, C. M. (1995). The role of knowledge in the policy process. *Journal of European Public Policy, 2*, 159–183.

Roemer, R. (1982). *Legislative action to combat the world smoking epidemic.* Geneva: WHO.

Roscam Abbing, E. W. (1998). *Tabaksontmoedigingsbeleid: Gezondheidseffectrapportage.* Utrecht: Netherlands School of Public Health (NSPH).

Ruiter, R., & Kok, G. (2006). Response to Hammond et al. showing leads to doing, but doing what? The need for experimental pilot-testing. *European Journal of Public Health, 16*, 225. https://doi.org/10.1093/eurpub/ckl014

Sarewitz, D. (2004). How science makes environmental controversies worse. *Environmental Science and Policy, 7*, 385–403.

Schwartz, R., & Rosen, B. (2004). The politics of evidence-based health policy-making. *Public Money & Management, 24*(2), 121–127. https://doi.org/10.1111/j.1467-9302.2004.00404.x

SCOTH. (1998). *Report of the Scientific Committee on tobacco and health.* London: Department of Health.

Sims, M., Salway, R., Langley, T., Lewis, S., McNeill, A., Szatkowski, L., & Gilmore, A. B. (2014). Effectiveness of tobacco control television advertising in changing tobacco use in England: A population-based cross-sectional study. *Addiction, 109*(6), 986–994. https://doi.org/10.1111/add.12501

Slob, M., & Staman, J. (2012). *Beleid en het bewijsbeest: Een verkenning van verwachtingen en praktijken rond evidence based policy.* Den Haag: Rathenau Instituut.

Smith, K. (2013). *Beyond evidence-based policy in public health: The interplay of ideas.* London: Palgrave Macmillan.

Stewart, E., & Smith, K. (2015). 'Black magic' and 'gold dust': The epistemic and political uses of evidence tools in public health policy making. *Evidence & Policy, 11*, 415–437.

STIVORO. (2010). *Van onderop en van bovenaf: De toekomst van tabaksontmoediging in Nederland 2011–2020.* Den Haag: STIVORO.

Stone, D. (2001). Learning lessons, policy transfer and the international diffusion of policy ideas. *CSGR Working Paper No. 69/01.*

Stronks, K., van de Mheen, H. D., Looman, C. W. N., & Mackenbach, J. P. (1997). Cultural, material, and psychosocial correlates of the socioeconomic gradient in smoking behavior among adults. *Preventive Medicine, 26*(5), 754–766. https://doi.org/10.1006/pmed.1997.0174

U.S. Department of Health and Human Services. (2000). *Reducing tobacco use: A report of the Surgeon General.* Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health.

US Surgeon General. (1986). *The health consequences of involuntary smoking.* Rockville: USDHHS.

Van der Kemp, S., & Bekker, B. (2007). Wat is effectief? De kruistocht van Kok. *TSG, 85*, 236–238.

Wakefield, M. A., Loken, B., & Hornik, R. C. (2010). Use of mass media campaigns to change health behaviour. *The Lancet, 376*, 1261–1271.

Warner, K. E., & Tam, J. (2012). The impact of tobacco control research and policy: 20 years of progress. *Tobacco Control, 21*, 103–109.

Weiss, C. H. (1980). Knowledge creep and decision accretion. *Science Communication, 1*(3), 381–404. https://doi.org/10.1177/107554708000100303

Werkgroep IBO Gezonde leefstijl. (2016). *IBO Gezonde leefstijl Eindrapportage van de werkgroep "IBO Gezonde leefstijl".* Den Haag: Ministerie van Financiën.

Wester, J. (1957). Roken en gezondheid. Rapport van de Gezondheidsraad. *Nederlands Tijdschrift voor Geneeskunde, 107*, 459–464.

WHO. (1979). *Controlling the smoking epidemic: Report of the WHO Expert Committee on Smoking Control*. WHO technical report series no. 636. Geneva: World Health Organization.

WHO. (1998). *Guidelines for controlling and monitoring the tobacco epidemic*. Geneva: World Health Organization.

WHO. (2003). *WHO framework convention on tobacco control*. Geneva: World Health Organization.

WHO. (2004a). *Building blocks for tobacco control: A handbook*. Geneva: World Health Organization.

WHO. (2004b). *Tobacco control legislation: An introductory guide* (2nd ed.). Geneva: World Health Organization.

WHO. (2008). *MPOWER*. Geneva: World Health Organisation.

Willemsen, M. C., De Vries, H., & Genders, R. (1996). Annoyance from environmental tobacco smoke and support for no-smoking policies at eight large Dutch workplaces. *Tobacco Control, 5*(2), 132–138.

World Bank. (1999). *Curbing the epidemic: Governments and the economics of tobacco control*. Washington: The World Bank.

Zahariadis, N. (2007). The multiple streams framework: Structure, limitations, prospects. In P. Sabatier (Ed.), *Theories of the policy process* (2nd ed.). Boulder, CO: Westview Press.

Zeeman, G., Willemsen, M. C., & Van Gennip, L. (2007). Foto's op pakjes passen in overheidsbeleid om tabaksgebruik te denormaliseren. *Tijdschrift voor Gezondheidswetenschappen, 85*, 234. https://doi.org/10.1007/BF03078670