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Who owns *Salmonella*?

The Politics of Infections shared by Humans and Livestock in the Netherlands, 1959-1965[1]

FLOOR HAALBOOM

In the period 1959-1965 the Netherlands witnessed a major controversy between agricultural and public health camps on livestock-associated *Salmonella*, and whether the state or the agricultural sector itself was responsible for its control. The case is used to argue for historiographical analysis of negotiations *between* the policy domains of public health and agriculture, rather than study these domains separately. Using Joseph Gusfield's concept of 'ownership' of public problems, the paper shows why attempts by public health experts to define salmonellosis as a public problem and control policy responses largely failed against the agricultural 'green front' of Dutch statutory industrial organisations (*publiekrechtelijke bedrijfsorganisaties*, PBOs), the Ministry of Agriculture and members of parliament. The paper also argues for historiographical attention to be given to the influence of PBOs on policy making in the second half of the twentieth century.

Van wie is *Salmonella*?
De politiek van door mensen en dieren gedeelde infectieziekten in Nederland, 1959-1965
In de periode 1959-1965 ontstond in Nederland een grote controverse tussen landbouw en volksgezondheid over met *Salmonella* besmet vee en of de staat of de landbouwsector zelf verantwoordelijk was voor de bestrijding van deze bacteriën. De casus laat de noodzaak zien van historiografische analyse van onderhandelingen *tussen* de beleidsdomeinen landbouw en volksgezondheid, in plaats van ze gescheiden te bestuderen. Aan de hand van Joseph Gusfields concept 'eigenaarschap' van publieke problemen wordt duidelijk waarom pogingen van volksgezondheidsdeskundigen om salmonellose als volksgezondheidsprobleem te definiëren en bestrijdingsbeleid vorm te geven grotendeels mislukten in de strijd

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met het agrarische 'groene front' van publiekrechtelijke bedrijfsorganisaties (PBO's), het landbouwministerie en parlementsleden. Het artikel toont daarom ook het belang van historiografische aandacht voor de invloed van PBO's op het maken van beleid gedurende de tweede helft van de twintigste eeuw.

Livestock keeping was greatly intensified during the twentieth century, in particular in the period after the Second World War. This development was accompanied by growing concerns about related public health impacts in many western countries, such as the effects of agricultural chemicals, veterinary drugs like antibiotics, and infectious diseases shared by humans and livestock. During the 1950s public health experts around the world observed a significant increase in the number of food infections caused by *Salmonella* bacteria from livestock.[2] In the Netherlands, a major producer and exporter of both livestock and its products, a peak in the number of cases of food infection during the summer of 1959 was especially worrisome. Human sufferers of salmonellosis most often experience digestive problems for a couple of days, but for vulnerable patients like children and elderly people the disease can be more serious. Registered Dutch figures show thousands of human cases per year and several dozens of salmonellosis deaths in the decades following the Second World War.[3] In a period in which infectious diseases were increasingly brought under control through vaccines and antibiotics, public health authorities came to regard livestock-associated salmonellosis as a serious public health problem.[4]

Historians of public health have largely confined themselves to state responses to *human* health and disease.[5] Relatively recently, historians have

1 This article is based on my PhD research on dealings with livestock-associated zoonotic diseases in the Netherlands (1898-2001), funded by the Faculty of Veterinary Medicine of Utrecht University, the Julius Centre for Health Sciences and Primary Care of the University Medical Centre Utrecht, the Dutch Ministry of Economic Affairs, and the Dutch Ministry of Health, Welfare and Sport. I am grateful to the organisers, authors and editors of this theme issue, my supervisors Frank Huisman, Peter A. Koolmees and Roel Coutinho, Krina Huisman and two anonymous reviewers for commenting on earlier versions of this article.

2 Anne Hardy, *Salmonella Infections, Networks of Knowledge, and Public Health in Britain, 1880-1975* (Oxford 2015) DOI 10.1093/acprof:oso/9780198704973.001.0001.

3 J. Huisman, *Microbiële voedselvergiftiging en voedselinfectie: epidemiologie en preventie* (Alphen aan den Rijn 1980) 26-28.

4 Anne Hardy, 'Food, Hygiene and the Laboratory: a Short History of Food Poisoning in Britain, circa 1850-1950', *Social History of Medicine* 12 (1999) 293-311 DOI 10.1093/shm/12.2.293; Dorothy Porter (ed.), *The History of Public Health and the Modern State* (Amsterdam, Atlanta 1994) 1.

5 See for instance: Christopher Hamlin, 'Public Health', in: Mark Jackson (ed.), *The Oxford Handbook of the History of Medicine* (Oxford 2012) 411-428 DOI 10.1093/oxfordhb/9780199546497.013.0023; Porter (ed.), *History of Public Health*.

moved to a broader perspective on disease and public health by turning their attention to animals, veterinary medicine and disease ecology.[6] This paper builds on this work, but also deviates by reasoning explicitly from the perspective of political history. The few existing political, agricultural or medical histories of post-war Dutch state policies, and historiography of agriculture and public health at large generally follow rather than question institutionalised task divisions between policy domains.[7] A problem-oriented approach on the Dutch case of salmonellosis is used here to revise this historiography. The paper shows that the boundaries between the policy domains of public health and agriculture were fiercely negotiated rather than taken for granted. It argues that both domains of public health and agriculture need to be taken into account to understand fully the negotiations over control of livestock diseases as public (health) problems, and the interests served in the process.

I focus on different stakeholders in dealings with salmonellosis in a short period of Dutch modern history, from 1959 until 1965. This period saw major struggles between a public health and an agricultural camp over how salmonellosis was to be defined as a public problem, who controlled or 'owned' this problem and how it was to be solved. 'Problem ownership' is a central concept in sociologist Joseph Gusfield's analysis of how problems come to be seen as public problems, that is, problems for which the state is responsible through public policy. Problem owners are those who 'possess the authority to name that condition a "problem" and to suggest what might be done about it'.[8] The case of the 1959-1965 salmonellosis controversy is one in which public health authorities failed to turn salmonellosis into 'their' public problem. Rather, the little-studied 'green front' of agricultural organisations, the Ministry of Agriculture and agricultural members of parliament played a crucial role in the design of salmonellosis control in the Netherlands. Thus, this paper fits in an international historiographical tradition that addresses tensions between public health reforms and economic interests.[9]

6 See for instance publications by Susan D. Jones, Abigail Woods, Anne Hardy, and Peter A. Koolmees.

7 See for instance: Sjoerd Keulen, *Monumenten van Beleid: de wisselwerking tussen Nederlands rijksoverheidsbeleid, sociale wetenschappen en politieke cultuur, 1945-2002* (Hilversum 2014); Erwin H. Karel, *De maakbare boer: streekverbetering als instrument van het Nederlandse landbouwbeleid 1953-1970* (Groningen 2005); Timo Bolt, *A Doctor's Order: the Dutch case of Evidence-Based Medicine (1970-2015)* (Antwerpen 2015).

8 Joseph R. Gusfield, 'Constructing the Ownership of Social Problems: Fun and Profit in the Welfare State', *Social Problems* 36 (1989) 431-441, 433 DOI 10.2307/3096810.

9 See on salmonellosis specifically: Hardy, *Salmonella*, chapter 2; Michael French and Jim Philips, 'Windows and Barriers in Policy-making: Food Poisoning in Britain, 1945-1956', *Social History of Medicine* 17 (2004) 269-284 DOI 10.1093/shm/17.2.269. Other examples: Claas Kirchelle, 'Toxic Confusion: the Dilemma of Antibiotic Regulation in West German Food Production (1951-1990)', *Endeavour* 40 (2016) 114-127 DOI 10.1016/j.endeavour.2016.03.005; Allan M. Brandt, *The Cigarette Century: The Rise, Fall, and Deadly Persistence of the Product that Defined America*

The salmonellosis debate took place in the context of the transition of Dutch society into a welfare state, relatively late compared to other European countries.[10] The Catholic-socialist coalition of the post-war reconstruction years and the confessional governments after 1958 extended the role of the state to stimulate economic growth. Especially in agriculture, state intervention was decisive. The agricultural landscape was changing rapidly as a result of the intensifying agribusiness, supported and driven by state agricultural policies of 'rationalisation' and 'modernisation'. Agricultural politics was a major backbone of the European Economic Community founded in 1958, culminating in its Common Agricultural Policy under the lead of EEC commissioner and former Dutch minister of agriculture Sicco Mansholt. To a lesser extent, Dutch state intervention with regard to public health was also increased.[11]

The expanding role of the state did not mean that ideals of private order disappeared. On the contrary, this period saw the neo-corporatist development of statutory industrial organisations (*publiekrechtelijke bedrijfsorganisaties,* PBOs). The PBOs combined private and public duties and regulatory power: they gave corporations responsibilities for the design of policy affecting their sector, expecting them to also pay attention to public interests. Catholic circles in particular saw this as a solution for the limitations of parliamentary democracy and political parties since the introduction of general suffrage.[12] The post-war coalition of Catholics and social democrats introduced the PBO Act (*Wet op de bedrijfsorganisatie*) of 1950: the Catholics secured a larger role for organised private initiative within state policy, while the social democrats secured the representation of employees within the PBOs. The PBO were especially taken on by smaller businesses in the food and retail trade, with the Agricultural Board (*Landbouwschap*) as the prime example, and was less successful in larger industry.[13] Historians therefore have generally dismissed the PBO system as a failure, with the exception of the Social Economic Council (*Sociaal Economische Raad,* SER), originally

(New York 2009); Naomi Oreskes and Erik M. Conway, *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming* (London 2010).

10 Jan Luiten van Zanden, *The Economic History of the Netherlands, 1914-1995: A Small Open Economy in the 'Long' Twentieth Century* (London 1998) chapter 4 DOI doi.org/10.4324/9780203984925.

11 Jan Bieleman, *Boeren in Nederland: geschiedenis van de landbouw 1500-2000* (Amsterdam 2008) 467, 474-476; Paul Juffermans, *Staat en gezondheidszorg in Nederland: met een historiese beschouwing over het overheidsbeleid ten aanzien van de gezondheidszorg in de periode 1945-1970* (Nijmegen 1982).

12 Ido de Haan, 'Parlementaire democratie en maatschappelijke organisatie: de politieke context van de Sociaal-Economische Raad', in: Teun Jaspers, Bas van Bavel and Jan Peet (eds.), *SER 1950-2010: zestig jaar denkwerk voor draagvlak* (Amsterdam 2010) 23-48.

13 E.J. Krajenbrink, *Het Landbouwschap: 'zelfgedragen verantwoordelijkheid' in de land- en tuinbouw 1945-2001* (Nieuwerkerk a/d IJssel 2005) 61-63, 159-162.

a PBO-umbrella organisation, which evolved into a major government advisory body.[14] However, historians have paid little attention to individual statutory industrial organisations and their influence on state policy.[15] By showing that the Feed Board (*Produktschap voor Veevoeder*) and Agricultural Board in particular shaped state responses to the public health problem of salmonellosis, this paper argues that the PBOs as non-parliamentary bodies of legislative power deserve more historiographical attention.

Livestock feed as a public health problem

In the post-war decades imported meals of animal origin rather than grains were increasingly used as a source of protein in livestock feed. Such meat, bone and fish meals could carry *Salmonella* bacteria to livestock, and public health experts in different countries singled out contaminated livestock feed as the cause of the observed increase in salmonellosis cases.[16] Dutch public health experts argued that this 'primary source' of *Salmonella* infection of livestock should be the most important target of control measures in order to eliminate 'the root of the evil' as the Dutch Health Council called it.[17] These experts believed that state-controlled sterilisation of imported meat, bone and fish meals would be most effective.

This argument fitted well in the social democratic perspective on the debate within the Catholic-socialist coalitions of the 1950s: should the state or should private organisations take the lead in public health policy? The social democrats preferred the state to play a major role in health policy, especially in preventive health care. The Catholics, however, envisioned a smaller role for the state and argued for public responsibilities of private organisations. Thus, the public health debate bears many similarities with the PBO debate, and indeed historical actors explicitly used this analogy in the early 1950s. The new Health Act (*Gezondheidswet*) of 1956 was a compromise between the two perspectives. In 1958 the Catholic-socialist government was dissolved because of this difference of opinion on the need to expand public services, including public health services. However, the dispute to some extent was politically opportunistic, because the confessional governments after 1958 continued to increase the role of the state in social security, public education, health

14 De Haan, 'Parlementaire democratie', 23-48; Friso Wielenga, *Nederland in de twintigste eeuw* (Amsterdam 2009) 198; J.J. Woltjer, *Recent verleden: de geschiedenis van Nederland in de twintigste eeuw* (Amsterdam 1992) 394-395.

15 Krajenbrink, *Het Landbouwschap* is the exception to this rule.

16 Hardy, *Salmonella*, chapters 7 and 8.

17 Gezondheidsraad, 'Rapport inzake het salmonellose-vraagstuk', *Verslagen en Mededelingen betreffende de Volksgezondheid* (1964) 419-567, 523. The author has translated all Dutch quotations to English.

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Figure 1:
Chief Veterinary Officer of Public Health and Veterinary Service director Jacques M. van den Born (centre) at the reopening of the public slaughterhouse in Veghel on 5 March 1971.
Brabants Historisch Informatiecentrum, Den Bosch.

services, housing and social work, although the extent and speed continued to be a source of frustration for the social democrats.[18]

It was within this political context that public health experts claimed ownership of salmonellosis as a public health problem, pointing out contaminated livestock feed as its primary cause. The quickly expanding State Institute for Public Health (*Rijksinstituut voor de Volksgezondheid,* RIV) became the major site for salmonellosis research, under the leadership of veterinarian Dan (E. H.) Kampelmacher, head of the RIV Laboratory of Zoonoses and the Dutch National Salmonella Centre.[19] The Chief Veterinary Inspectorate of Public Health (*Veterinaire Hoofdinspectie van de Volksgezondheid*, part of the Ministry of Social Affairs and Public Health) was responsible for veterinary public health and commissioned most RIV salmonellosis studies. The new Animal Rendering Act (*Destructiewet)* of 1957 regulated the use of dead livestock and animal remains, for instance in feeds, in order to eliminate pathogens from this source. Putting the processing of animal remains under official veterinary public health responsibility was seen as 'the closing piece' in meat inspection regulation.[20] However, the Ministry of Agriculture was responsible for *imported* meat and bone meals which did not need to comply with the Animal Rendering Act and hence continued to be a potential source of disease.[21]

For that reason, the public health veterinarians of the Veterinary Inspectorate and the RIV highlighted imported contaminated livestock feed in their definition of the salmonellosis problem.[22] The Chief Veterinary Officer of Public Health (Figure 1) began to argue for state-imposed sterilisation of meat, bone and fish meals as the most important control measure during the 1950s. After the large outbreak of salmonellosis in the summer of 1959, the Health Council copied this analysis by placing contaminated feeds and sterilisation on the agenda as the most important aspect of the salmonellosis

18 Juffermans, *Staat*, 145-148; Piet de Rooy, *Republiek van rivaliteiten: Nederland sinds 1813* (Amsterdam 2002) 234-236.

19 W. Edel, 'Diergeneeskunde en Volksgezondheid ofwel Veterinaire Volksgezondheid', *Tijdschrift voor Diergeneeskunde* (hereafter *TvD*) 128 (2003) 618-626, 624-625; H. van Zon, *Tachtig jaar* RIVM (Assen 1990) chapter 5, 244-248. On the international network of *Salmonella* centres, see: Hardy, *Salmonella*, 147-148.

20 P.A. Koolmees, *Symbolen van openbare hygiëne: gemeentelijke slachthuizen in Nederland* 1795-1940 (Rotterdam 1997) 223.

21 Ibidem, 178-179. See also: Nationaal Archief Den Haag (hereafter NA), Archives of the *Gezondheidsraad* 2.15.36 (hereafter GR), inv. nr. 2266, Minutes of the Salmonellosis Committee, 1 December 1959, 3.

22 NA, Archives of the *Veeartsenijkundige Dienst* 2.11.29 (hereafter VD), inv. nr. 779, Documents on (re)sterilisation of meat, bone and fish meal (later Sterilisation documents), Van den Born to Minister of Agriculture, 14 January 1961; Ibidem, GR, inv. nr. 2271, Documentation for the salmonellosis committee, J.M. van den Born, 'Rapport over onderzoekingen naar het voorkomen van Salmonella-bacteriën in dier- en vismeel', 5 August 1959.

problem.[23] Concerns about contaminated feed were related to the more general concerns of public health experts about large-scale changes in (veterinary) medicine, agriculture and the food industry after the Second World War.[24]

Many public health experts feared economic interests would prevail over public health interests in such a case as the salmonellosis problem. For chairman Wester and other members of the Health Council Committee taking measures against *Salmonella* contaminated feeds was a matter of principle, defending public health interests against economic interests. In the first meeting of the committee, Wester argued that 'we should study this issue from the perspective of public health, and leave the economy out of consideration'.[25] We will now take *Salmonella's* economy, which the Health Council so explicitly wished to ban from its discussions, as the subject of our next investigation.

Agricultural claims about *Salmonella*

With their focus on imported livestock feeds, public health experts had singled out a source of disease that also happened to be one of the pillars of what critics in the 1960s would start calling factory farming (*bio-industrie*).[26] The vast expansion of intensive pig and poultry farms could only happen because the feed industry supplied farms with huge quantities of imported feeds, including cheap protein sources like meat, bone and fish meals.[27] The industry also financed the enlargement of farms in exchange for feed contracts. Thus the feed industry played a major role in the development of the agribusiness, in which farms were embedded in increasingly longer food production chains.

23 Ibidem, inv. nr. 2266, Minutes, 1 December 1959, 1-3; Ibidem, inv. nr. 2267, Correspondence salmonellosis committee, Wester to Minister of Social Affairs, 4 December 1959.

24 Van Zon, *Tachtig jaar* RIVM, 241-244; R.B.M. Rigter, *Met raad en daad: de geschiedenis van de Gezondheidsraad 1902-1985* (Rotterdam 1992) 245-248. See also: NA, GR, inv. nr. 2266, Minutes, 1 December 1960, 15; Anna Charlotte Ruys, *Keerzijden van vooruitgang* (Haarlem 1959).

25 NA, GR, inv. nr. 2266, Minutes, 1 December 1959, 3. The separation between science and politics the Council proclaimed explicitly from the 1950s, was very different from its 'backstage' operations. Rigter, *Met Raad,* 336-339; Wiebe Bijker, Roland Bal, and Ruud Hendriks, *The Paradox of Scientific Authority: the Role of Scientific Advice in Democracies* (Cambridge Mass. 2009).

26 Krajenbrink, *Het Landbouwschap*, 195, 260, 305; Bieleman, *Boeren*, 520-521, 527-528; Erwin H. Karel, *Boeren tussen markt en maatschappij: Essays over de effecten van de modernisering van het boerenbestaan in Nederland (1945-2012)* (Wageningen 2013) 174-176.

27 Only in 1958, almost 100,000 tons of meat, bone and fish meal were imported in the Netherlands. NA, Archive of *Produkt- en Bedrijfschappen* 2.06.059.18 (hereafter PBO), inv. nr. 227, *Produktschap voor Veevoeder* (hereafter *PvV*) documents, Memorandum regarding resterilisation of fish and animal meal [January 1959] 3.

By the mid-1980s two-thirds of feed components were imported from outside the European Economic Community, which meant that 60 to 80 percent of domestic meat production in the Netherlands was based on imported feeds.[28]

As a result, the *PBO* Feed and Agricultural Boards quickly became involved in the salmonellosis debate. Different companies growing feed crops, producing waste products used for feeds, processing raw materials into feeds and trading feeds were represented on the Feed Board, founded in 1956. Unfortunately, only a selection of the archives of this *PBO* organ has been preserved in the National Archives, but this limited source can be complemented by annual reports and documents present in the archives of other salmonellosis debate stakeholders.[29] The Agricultural Board, founded in 1954, has been better studied: it consisted of representatives of the Protestant, Catholic and liberal agricultural organisations and unions of farm labourers. The Agricultural Board operated in such close and successful collaboration with the Ministry of Agriculture and Fisheries and the Dutch parliament (especially its confessional parties) that historians of agriculture have described the three as the 'green front', the 'farmers bulwark' or the 'iron grip'.[30]

As Krajenbrink argues in his history of the Agricultural Board, its attitude in public debates, on the whole, was reactive and defensive, aimed at protecting the status quo, illustrated in the 1980s manure debate.[31] The Feed and Agricultural Boards reacted similarly to the salmonellosis problem and quickly challenged the ownership claim of public health experts. Once public health experts argued for the sterilisation of imported meat, bone and fish meals as the central policy measure in dealing with salmonellosis, the Boards immediately started lobbying to prevent the Ministry of Agriculture from imposing meal sterilisation.[32]

Although the Board members sometimes had competing interests,[33] their criticism was generally aimed at three main areas: the costs, the governmental interference with the freedom of private enterprise and the reliability of *Salmonella* research conducted by public health experts. Regarding

28 Bieleman, *Boeren*, 520.

29 NA, PBO, inv. nr. 227, Minutes of closed *PvV* meetings; Ibidem, inv. nr. 228-230, Minutes of public *PvV* meetings. NA, VD and NA, GR contain several missing documents.

30 Karel, *Boeren*, 40-43; Krajenbrink, *Het Landbouwschap*, 209, 235-238; Johan van Merriënboer, 'Commissioner Sicco Mansholt and the creation of the CAP', in: Kiran Klaus Patel (ed.), *Fertile Ground for Europe? The History of European Integration and the Common Agricultural Policy since 1945* (Baden-Baden 2009) 181-197, 185 DOI 10.5771/9783845217390-180.

31 Krajenbrink, *Het Landbouwschap*, 149.

32 NA, PBO, inv. nr. 227, *PvV* documents, correspondence, December 1958-January 1959; Ibidem, inv. nr. 779, Sterilisation documents, *Landbouwschap* to Minister of Agriculture, 14 December 1960.

33 For example, companies importing ingredients for animal feeds from abroad competed with those using Dutch products and waste complying with the Animal Rendering Act. See NA, PBO, inv. nr. 227, *PvV* documents.

the costs, the Boards and their member organisations were quite clear: obligatory sterilisation of all imported animal and fish meals was simply too expensive. Feed was farmers' greatest expenses, after labour costs, and efficient feeding was one of the aims of the state agricultural modernisation programme in this period.[34] Costs of sterilising imported meat, bone and fish meals would directly threaten the trade position of both the Dutch feed and meat markets. According to the Society of Importers of Fish and Animal Meals the costs of sterilisation could add up to 'about *f* 10,000,000!'.[35] The Feed Board emphasised that these costs had to be met by the buyers of feeds – the farmers.[36]

The feed trade and agricultural representatives also opposed the public health outlook on salmonellosis as a *public* problem in need of state intervention. They argued that obligatory sterilisation would do more harm than good in controlling the salmonellosis problem, as it would take away the market incentive for private enterprises to import *Salmonella*-free products. Government intervention would only reward bad practices.[37]

Furthermore, by rejecting their scientific outcomes, the PBOs challenged the authority of public health experts and thus their ownership claim. The feeds trade and farmers' representatives found it extremely unlikely that livestock feeds were the primary cause of the salmonellosis problem, as there were many more infection sources of *Salmonella*. With reference to veterinary literature, one of the member organisations of the Feed Board listed 'frozen or salted meat, wool and other hair, hides, grain, cattle cakes, eggs and egg products, rats, flies, gulls, mice, vermin, cattle, poultry, canals, ditches and especially humans'.[38] Moreover, the companies found proof of the relation between the *Salmonellae* found in animals and people, and the ones found in meal unconvincing. Most *Salmonellae* were isolated from cattle and humans, 'groups not consuming the meat, bone and fish meals at issue'.[39]

The close collaboration between the Ministry of Agriculture and Fisheries and the agricultural PBOs meant that the Ministry of Agriculture took the agricultural challenges of the public health salmonellosis problem very seriously, as will be shown in more detail below. This fits in the broader context of agricultural policy in Western Europe. Protection of agricultural interests and the inclusion of the agricultural sector in welfare state arrangements were central priorities in agricultural policy in Western Europe

34 Karel, *De maakbare boer*, 104, 163-164.

35 NA, PBO, inv. nr. 227, *PvV* documents, *Vereniging van Importeurs van Vis- en Diermeel* to Feed Board, 24 December 1958, 9.

36 Ibidem, Memorandum [January 1959] 5.

37 NA, VD, inv. nr. 779, Sterilisation documents, Agricultural Board to Minister of Agriculture, 14 December 1960, 2.

38 NA, PBO, inv. nr. 227, *PvV* documents, *Vereniging van Importeurs van Vis- en Diermeel* to Feed Board, 24 December 1958, 4.

39 Ibidem, Memorandum [January 1959] 4.

after the Second World War.[40] The Netherlands was one of the most active supporters of protectionism and interventionism in its agricultural sector via policies of economic planning. Important policy aims were cheap production to prevent famine (in the post-war context), modernisation of agriculture and decent living wages in the agricultural sector.[41]

The agricultural camp explicitly used these concerns in its opposition to the public health definition of the salmonellosis problem. One of the most outspoken experts supporting the argument of the agricultural Boards, veterinary professor Albert van der Schaaf, thought state-imposed sterilisation of feeds a direct danger to the position of farmers, who he described as 'the part of our national population that does not share in our national distribution of wealth and the five-day working week'.[42] Instead, he preferred a 'voluntary control system' and a contribution from consumers to cover the costs.[43] The salmonellosis problem touched upon deep social concerns on both sides.

Who owns *Salmonella*?

Ownership of the salmonellosis problem was occasion for years of controversy between the public health and agricultural camps. Policy-making on the salmonellosis problem – in the words of Health Council chairman Wester – 'comes under two Departments. At the Agricultural Department it is approached from the economic side, and here we look at it from the public health side'.[44] The Ministry of Social Affairs was responsible for *national* meat and food inspection, especially through the Chief Inspectorates of Public Health. Livestock, meat produced for export and imported meat, bone and fish meals however, fell under the responsibilities of the Ministry of Agriculture with its Veterinary Service, the Cattle Act (*Veewet*) and regulations designed by PBOs.

An institutional link between the two separate policy domains was the veterinarian Jacques van den Born (Figure 1), who was director of both the Veterinary Inspectorate of Public Health and the Veterinary Service. Nevertheless, Van den Born strengthens my argument of a distinction between the public health and the agricultural camp. Van den Born strongly identified with the public health perspective (he played an important role in defining contaminated feed components as the core issue of the salmonellosis

40 Kiran Klaus Patel, 'The Paradox of Planning: German Agricultural Policy in a European Perspective, 1920s to 1970s', *Past & Present* 212 (2011) 239-269 DOI 10.1093/pastj/gtr005.

41 Van Merriënboer, 'Commissioner', 185-186.

42 NA, GR, inv. nr. 2271, Documentation, Van der Schaaf to Wester, 11 November 1961.

43 A. van der Schaaf, 'Salmonellosis bij de huisdieren', *TvD* 84 (1959) 1430-1434, 1432.

44 NA, GR, inv. nr. 2266, Minutes, 1 December 1959, 17.

problem) and as a result 'two camps exist within [the agricultural] Ministry with regard to the solution of [the salmonellosis] problem'.[45] The public health perspective was a minority perspective at the Ministry of Agriculture and consequently Van den Born found himself in a difficult position. Secretary-General of Agriculture J. H. Patijn for instance, called Van den Born's continuing argument for obligatory sterilisation 'an attempt to enforce', while another high-ranking official referred to it as 'guerrilla' tactics.[46] Van den Born himself often felt that he was kept out of the decision-making process at the Ministry of Agriculture.[47] In short, the salmonellosis ownership controversy divided the Ministry of Agriculture itself.

Before analysing the politics of the controversy in more detail in section four, I will give an overview of its outcomes. Two compromises were debated in the first half of the 1960s: the first concerned self-regulation by the Feed Board, while in 1965, the parliament passed the inclusion of salmonellosis in the Cattle Act, in the form of the 'little Salmonella Bill' (*het Salmonellawetje*). Both compromises were formulated and institutionalised within – and thus owned by – the agricultural domain and vehemently opposed by the public health camp.

The Feed Board introduced self-regulation on *Salmonella*-contaminated meat, bone and fish meal as a strategy to ward off state-imposed obligatory sterilisation in March 1960. This self-regulation demanded inspection of samples of imported lots of all kinds of meat, bone and fish meals by the General Inspection Service (*Algemene Inspectiedienst*) of the Ministry of Agriculture, and sterilisation of lots found to contain *Salmonella* bacteria. However, the regulation was largely a paper measure. Few samples were tested, further distribution did not need to wait on laboratory results, and companies could reuse '*Salmonella*-free' certificates issued by the Feed Board. Following expert criticism of this 'repressive' regulation, in July 1961 it was replaced by a 'preventive' one, which still allowed exemptions, but did prohibit the shipping of lots before test results were known.[48] The Feed Board self-regulation activities fundamentally clashed with the public health perspective on salmonellosis as a *public* problem. Director-General of Public Health Piet Muntendam wrote to the Minister of Agriculture: 'Control of salmonella infections in my view is primarily a public health problem.

45 NA, VD, inv. nr. 779, Sterilisation documents, Van den Born to Minister of Agriculture, 30 December 1960, 1.

46 Ibidem, inv. nr. 848, Sterilisation documents, Secretary-General of Agriculture to Minister of Agriculture, 27 March 1962; anonymous draft to Minister of Agriculture [June 1961] 1.

47 Ibidem, inv. nr. 779, Sterilisation documents, Van den Born to Minister of Agriculture, 30 December 1960.

48 NA, GR, inv. nr. 2267, Correspondence, *PvV*, 'Verordening Gezondheidseisen Geïmporteerde Dierlijke Eiwitten', 25 November 1959; PvV, *Jaarverslag 1961* [The Hague 1962] 20.

Therefore, I deem it wrong in principle, that the design and implementation of control measures [...] is left to a Product Board'.[49]

The Ministry of Agriculture proposed another solution with the little *Salmonella* Bill, giving the Minister of Agriculture direct control over when the Cattle Act would have practical consequences for *Salmonella*. A compromise on the contaminated meal controversy was part of this proposal. As meat and bone meal were more often found to be contaminated, and fish meal made up the bulk of the trade in animal proteins (Figure 2), high-ranking agricultural officials proposed to introduce obligatory sterilisation of meat and bone meal, and abstain from sterilising fish meal.[50] The debate on this proposal became known as the 'fish meal dilemma', and delayed the passing of the little *Salmonella* Bill until 1965, leaving the fish meal dilemma unresolved.[51]

Salmonella politics

In short, the public health camp failed and the agricultural camp was successful in claiming ownership of the salmonellosis problem, although it had initially been defined by public health experts. In this section, reasons for this outcome will be analysed by studying *Salmonella* politics in the realms of science and public debate.

While the aim was to depoliticise the controversy with expert advice, this failed as both camps selected their own scientific experts, only trusted affiliated laboratories and refused to meet each other. Expert committees became the most important sites for the polarised salmonellosis ownership dispute during its first years. Only two days after the Minister of Social Affairs had asked Health Council advice, the Minister of Agriculture asked a different group of experts, led by agriculturalist M.J.L. Dols, for advice on the contaminated meals issue. Although this 'Dols Committee' presented itself as occupying the middle position between public health experts and the Agricultural and Feed Boards, it preferred self-regulation by the sectors, focussing on criticising the obligatory sterilisation measure, and thus in effect supported the Boards' perspective.[52] Its members were agricultural scientists, veterinarians and physicians with close ties to the agricultural world.[53]

49 NA, GR, inv. nr. 2267, Correspondence, Director-General of Public Health on behalf of the Minister of Social Affairs to Minister of Agriculture, 22 November 1960, 6.

50 NA, VD, inv. nr. 779, Sterilisation documents, Director-General of Food Supply to Van den Born, Dols and Zandstra, 19 September 1961; PvV, *Jaarverslag 1962* [The Hague 1962] 19.

51 *Staatsblad* 387 (1965) 1015.

52 NA, GR, inv. nr. 2267, Correspondence, M.J.L. Dols, T. Mulder et al., 'Rapport van de Commmissie van Advies inzake hersterilisatie van vis- en diermeel', January 1960.

53 See for example on Dols: Pim Huijnen, *De belofte van vitamines: Voedingsonderzoek tussen universiteit, industrie en overheid 1918-1945* (Hilversum 2011) 123, 132-134.

▲

Figure 2:

Piles of fish meal in a Peruvian harbour, photographed by Dutch *Salmonella* experts. Most fish meal traded internationally was Peruvian. Nationaal Archief Den Haag, Archives of the *Veearsenijkundige Dienst*, inv. nr. 779.

Member Albert van der Schaaf, professor of veterinary bacteriology, was the most vocal opponent of the public health argument and an active supporter of the Agricultural and Feed Boards.[54] The Health Council salmonellosis committee consisted of physicians and veterinarians working in public health.

The Feed Board thought the proposal of the Dols Committee 'a real possibility', while the Chief Veterinary Officer of Public Health thought it 'useless for the current difficulties' and the Health Council provided the Minister of Social Affairs with counter advice.[55] An unknown official of the Ministry of Agriculture argued the Dols committee had 'authority hard to dispute', while he called the Health Council salmonellosis committee's criticism of the Dols report 'a kind of counter view [...] signed by Dr. Wester, chairman of a Social Affairs committee'.[56] This image of the Health Council as a biased lobby group for the Ministry of Social Affairs did not match its self-image as a neutral scientific advisory body for the government.[57] Thus, rather than depoliticising the problem, the two expert committees contributed to the polarisation.

Both camps produced a large number of *Salmonella* studies in different affiliated research institutes, which regularly disagreed on scientific standards and quality. The *RIV* conducted studies ordered by the Chief Veterinary Inspectorate of Public Health.[58] The State Agricultural Testing Station (*Rijkslandbouwproefstation*) in Maastricht and Van der Schaaf at the Veterinary Faculty provided the Feed Board and the Ministry of Agriculture with most figures and arguments.[59] The two camps presented their own research as well-informed and neutral, while they depicted the other side as incompetent, biased and politically informed. The public health camp thought scientific knowledge produced by institutes with close ties to agricultural stakeholders unreliable. The agricultural camp argued that research on *Salmonella*-contaminated feeds could only deliver sound results when researchers had a

54 See for instance: NA, GR, inv. nr. 2271, Documentation, A. van der Schaaf, 'Het vraagstuk der hersterilisatie benaderd door vraag en antwoord', 28 November 1960; NA, PBO, inv. nr. 227, *PvV* documents, Minutes, 6 December 1961, 3-4.

55 NA, GR, inv. nr. 2267, Correspondence, M.J.L. Dols, T. Mulder a.o., 'Rapport', 5 January 1960; Ibidem, inv. nr. 2269, Wester, Memorandum to Minister of Social Affairs on the sterilisation issue, 24 June 1960.

56 NA, VD, inv. nr 848, Documents on (re)sterilisation of meat, bone and fish meal (later Sterilisation documents), Anonymous draft to Minister of Agriculture [June 1961] 2-3.

57 Rigter, *Met raad*, 336-339.

58 See for instance: E.H. Kampelmacher et al., 'Verdere onderzoekingen over Salmonella in slachthuizen en bij normale slachtvarkens', *TvD* 87 (1962) 1486-1520; J. Jacobs et al., 'Salmonella-kiemen in geïmporteerd vismeel', *TvD* 88 (1963) 1404-1414.

59 See for instance: A. van der Schaaf, H.J.H. van Zijl, and F.H. Hagens, 'Diermeel en Salmonellosis', *TvD* 87 (1962) 211-221; NA, VD, inv. nr. 779, Sterilisation documents, Van Zijl to Mulder, 30 March 1961; Ibidem, Van Beukering to Van den Born, 12 July 1963.

good knowledge of the practice of livestock keeping and the feed industry.[60] When for instance the RIV concluded that a far larger percentage of fish meal was contaminated with *Salmonellae* than the Feed Board's figures had indicated,[61] this only fuelled the fish meal dilemma as 'controversial point'.[62]

Distrusting the alliance between their agricultural peers and corporate interests, experts from the public health camp in particular regularly refused to meet in principle.[63] As the top of the Ministry of Agriculture demanded 'a shared viewpoint' on the fish meal dilemma from its advisers,[64] Van den Born was eventually forced to agree with a meeting.[65] However, the camps continued to disagree fundamentally on the preferable solution, as a process of negotiating the interpretation of the meeting in different minutes shows.[66] Policies based on *Salmonella* science continued to be a controversial issue.

All in all, public health experts failed to claim ownership of salmonellosis through science. As imported feeds were formally the agricultural ministry's responsibility and the agricultural camp had a broader social base than the public health camp, agricultural parties were more successful in minimising the public health influence on policy responses. For example, the Minister of Agriculture demanded the Feed Board change its 'repressive' self-regulation into a 'preventive' one based on the Dols Committee's advice, while leaving room for exceptions.[67] The Feed Board's fear of general obligatory sterilisation and its promised influence on the composition of an expert exemption committee were major incentives to agree eventually. The exemption committee would decide which meal products and countries of origin would get a release from testing. At the suggestion of the Feed Board, members of the exemption committee became supporters of the Board's perspective, like chairman Albert van der Schaaf.[68]

60 See for instance: Ibidem; Ibidem, Kampelmacher to Van den Born, 23 July 1963.

61 The RIV concluded that 26-31 percent of imported fish meal was very likely contaminated with *Salmonella* bacteria, against claims of the agricultural camp that fish meal contamination was sporadic. Archives RIVM, Bilthoven, report 73/63, E.H. Kampelmacher, 'Onderzoekingen over het voorkomen van Salmonellakiemen in geïmporteerd vismeel', April 1963; NA, VD, inv. nr. 779, Sterilisation documents, Van Beukering to Van den Born, 12 July 1963.

62 Ibidem, W[ellen] to Van den Born, 26 September 1963.

63 See for instance: NA, GR, inv. nr. 2266, Minutes, 1 December 1959, 17; Ibidem, 29 March 1960, 2; Ibidem, 22 April 1960, 1-16; Ibidem, 14 June 1960, 1-6.

64 NA, VD, inv. nr. 779, Sterilisation documents, W[ellen] to Van den Born, 26 September 1963.

65 Ibidem, Van den Born to Van Beukering, 14 October 1963; Ibidem, Van den Born to supporters of the agricultural camp and the RIV, 17 October 1963.

66 Feed Board and Veterinary Service versions of minutes of the meeting have been preserved: NA, VD, inv. nr. 779, Sterilisation documents, Minutes, November 1963.

67 Ibidem, Minister of Agriculture to Feed Board, 9 December 1960; Ibidem, Minister of Agriculture to Minister of Social Affairs, 21 January 1961.

68 Ibidem, Minutes Feed Board, 26 April 1961, 5-7.

Informed by his public health advisers, the Minister of Social Affairs objected, but without effect.[69]

Public attention for the public health camp's perspective challenged the agricultural camp's advantage in the dispute. However, also in this case the broader social base and involvement of organised parties with concrete financial interests meant agriculture was eventually more successful. Aware of their inability to prevent PBO influence on salmonellosis policy via the public health ministry, several public health experts made their concerns known via the press.[70] The agricultural camp felt very threatened by such attention for salmonellosis in popular media,[71] and it probably stimulated its willingness to consider obligatory sterilisation of imported meat and bone meal as a compromise. Members of the Feed Board saw the 'worthless and biased reporting' as attempts of the public health camp to unfairly publicly condemn the animal feeds industry, and to impose its will after 'the official way' had failed.[72] Moreover, public attention was feared as 'a danger to the entire feed sector': media attention could inspire parliamentary debate and spread to other countries. As 'the freedom of the press complicates preventing such publications',[73] the Board considered counter statements in the media, but decided against this because of fears this would attract even more public attention. It decided to warn the Minister of Agriculture about 'the writing' (*het geschrijf*) of the public health camp, and to ask their supporter Van der Schaaf to write a counter pamphlet.[74] When *Salmonella*-contaminated meat and bone meal was also discussed on television,[75] the Feed Board changed strategies. It urged journalists to pay attention to complexities of the salmonellosis problem that could be pointed out only by experts like Van der Schaaf, and Van der Schaaf's counter-argument was taken serious by at least one agricultural journalist of a social democratic newspaper.[76] The effect of this was that the issue of contaminated meal was discussed as a matter of scientific doubt in the media in the following years.[77]

69 NA, GR, inv. nr. 2267, Correspondence, Minister of Social Affairs to Minister of Agriculture, 14 March 1961, 1.

70 'Volksgezondheid', *Haagse Post*, 12 November 1960; A.L. Noordam, *Stop de Salmonella* (AO-reeks, Amsterdam, 20 October 1961); C. Bergsma, 'Paratyfus in 1961 record ondanks koude zomer', *Het Vrije Volk*, 2 January 1962.

71 NA, VD, inv. nr. 779, Sterilisation documents, A. van der Schaaf to A.C. Ruys, 17 November 1960; NA, GR, inv. nr. 2271, Documentation, A. van der Schaaf to J. Wester, 11 November 1961, 1 and 3.

72 NA, PBO, inv. nr. 227, Minutes, 6 December 1961, 3.

73 Ibidem.

74 Ibidem, 4.

75 AVRO television broadcast *FLITS*, 26 January 1962.

76 PvV, *Jaarverslag 1962* [The Hague, 1962] 22; 'Grote partijen diermeel moeilijk te hersteriliseren', *Het Vrije Volk* (24 February 1962); NA, GR, inv. nr. 2271, Documentation, Feed Board, 'Salmonella-vijand van de volksgezondheid nummer 1?'.

77 E.g. 'Tweede Kamer aanvaardde wijziging Veewet', *Algemeen Handelsblad*, 12 February 1965, 4.

The salmonellosis controversy also attracted attention as part of a more general public debate on the PBOs. The compromise between different political perspectives on the PBO design in the 1950 PBO Act was considered unsatisfactory by all parties – a major reason why the PBOs were not an overall success.[78] 1962 saw the first major parliamentary debate on corporatism, which only survived because of the strong parliamentary support for the Agricultural Board, according to its historian Krajenbrink.[79] In the early 1960s the Consumers Union (*Consumentenbond*) referred to the salmonellosis controversy as part of its criticism of the PBOs, and of the tendency to move commodities inspection responsibilities from public to corporate hands.[80] Indeed, concerns about the power of producers in the PBO system was an important reason for several officials of the Ministry of Agriculture and Food supply (!) to found the Consumers Union in 1953, and to aspire to a role for this organisation within the statutory industrial organisations. This failed because of successful opposition of producers and the initial small number of member of the Consumers Union. This 'difficult start' of the Consumers Union explains why it was not able to successfully counter the green front in the dispute on ownership of salmonellosis.[81]

With the discussions on the little *Salmonella* Bill, Dutch parliament became involved in the salmonellosis debate, and this changed the odds to the advantage of the agricultural camp again. As we have seen already, salmonellosis policy compromises were designed and institutionalised at the Ministry of Agriculture, where the Feed and Agricultural Boards had decisive influence, while public health experts had very little. The latter were well aware that the impact of the little *Salmonella* Bill depended on the willingness of the Minister of Agriculture to use it: 'If the Minister fails to do this, nothing will happen.'[82] Opposition to the prospect of obligatory sterilisation of imported meat and bone meal now also included the parliamentary committee on agriculture.[83] For the public health camp this parliamentary opposition was particularly worrying, as the public health parliamentary committee was not allowed to react to proposed changes in the *agricultural* Cattle Act before the plenary debate in parliament. Moreover,

78 De Haan, 'Parlementaire democratie', 23-48.

79 Krajenbrink, *Het Landbouwschap*, 399-400.

80 'De controle op besmetting met Salmonella-bacteriën', *Consumentengids* 9 (1961) 189.

81 Johan van Merriënboer, 'De moeizame start van de Consumentenbond', *Politieke opstellen: Jaarlijkse uitgave van het Centrum voor Parlementaire Geschiedenis* 18 (1998) 52-69.

82 NA, GR, inv. nr. 2266, Minutes, 27 June 1961, 14.

83 For example: A. van der Schaaf, 'Salmonellose onder de werking van de Veewet', *TvD* 87 (1962) 976-980; *Verslag der Handelingen van de Tweede Kamer der Staten Generaal* (hereafter: HTK) 1961-1962, Bijlage 6505 Wijziging van artikel 45 van de Veewet, nr. 4, Vaste Commissie voor Landbouw en Visserij, Voorlopig Verslag, 13 March 1962; NA, GR, inv. nr. 2271, Documentation, Feed Board, 'Enkele kritische kanttekeningen op de Memorie van Antwoord 6505 No. 5 met betrekking tot wijziging van art. 45 van de Veewet', June 1962.

public health representatives in parliament turned out to know little about the salmonellosis debate.[84] Again, we see that the public health salmonellosis problem was primarily a problem of a small group of *experts* concerned about abstract public health interests and without organised and formalised broad social support comparable to the green front.

The agricultural opposition to meat and bone meal sterilisation, and the public health opposition to the exemption of fish meal, meant the plenary parliamentary debate on the little *Salmonella* Bill was postponed several years. In 1964, when media attention for the salmonellosis problem had subsided, import of *Salmonella*-contaminated Argentinian meat became occasion for the ministers to agree on the meat and bone meal sterilisation compromise in order to be able to control such imports by means of the little *Salmonella* Bill.[85] Apparently, the agricultural camp had no difficulty in considering *Salmonella* a public problem when foreign products were at stake. The Lower Chamber repeated the whole salmonellosis debate in a nutshell, illustrating the success of the green front in claiming ownership. Social democrat member of the opposition and general practitioner Jan Lamberts was a lonely voice in defending the public health perspective. A majority of confessionals and liberals repeated the arguments of the Agricultural and Feed Boards, emphasised the disagreements among experts about what should be done, and questioned the importance of salmonellosis to public health. The little *Salmonella* Act was passed, leaving fish meal untouched and the public health camp with a sense of defeat for decades to come.[86]

Conclusion

In this paper the 1959-1965 Dutch *Salmonella* controversy is used to study negotiations between the policy domains of public health and agriculture on a livestock-associated public health problem using Gusfield's concept of 'problem ownership'. Ownership of the salmonellosis problem was disputed between the domains of public health and agriculture. The camps had opposite perspectives, in particular on the issue of *Salmonella*-contaminated meat, bone and fish meals used in livestock feeds. The public health camp thought the interest of public health should always have priority over economic interests and the state should be responsible for *Salmonella* control, starting with the sterilisation of imported meat, bone and fish meals. The agricultural camp argued for the importance of cheap feeds for the

84 Ibidem, inv. nr. 2266, Minutes, 20 June 1962, 3-4.

85 NA, VD, inv. nr. 549, Documents on *Veewet* changes, correspondence, August-December 1964.

86 *HTK* 1964-1965 (11 February 1965) 1163-1174; Gezondheidsraad, *Advies inzake het Salmonellosevraagstuk* (Den Haag 1978) 2; interviews Floor Haalboom with Joop Huisman, 4 and 28 March 2014.

rapidly intensifying agribusiness and questioned both the central role of contaminated feeds within the salmonellosis problem and its definition as a *public* problem demanding state intervention.

The public health camp's ownership claim largely failed, while the 'green front' of agricultural statutory industrial organisations (*PBOs*), the Ministry of Agriculture, and the parliamentary agricultural committee succeeded in securing control over salmonellosis policy responses. In the first place, the large economic interests of the agricultural sector at stake were a major factor behind this outcome. Secondly, experts on both sides failed to depoliticise the salmonellosis problem through science, as expert committees affiliated to the public health and agricultural camps themselves became major sites of political debate. The agricultural camp feared the potential effects of media attention for the public health perspective, which probably helped to convince it of the compromise of meat and bone meal sterilisation. However, media also took over the image of scientific controversy on the meal issue actively painted by the organised feed sector, reminiscent of the American business-driven creation of scientific doubt concerning public health and environmental issues in the same period.[87] Thirdly, a small group of public health *experts* primarily defended the rather abstract public health interests, while the green front had a much broader and better organised base of support for the defence of very concrete economic interests. Lastly, the Ministry of Social Affairs controlled product inspection, but did not have control over the ways in which livestock were reared, nor over livestock disease control, which were the responsibilities of the Ministry of Agriculture. The public health perspective *within* the Ministry of Agriculture was a minority perspective and proved to have little influence.

The salmonellosis case is typical of the power relations between the domains of public health and agriculture in the Netherlands during the twentieth century.[88] The environmental policies on the expanding livestock manure problem in the 1980s would be the first interference with the agricultural sector's self-regulatory power.[89] It would be worth investigating how the Netherlands, as major exporter of agricultural products, related to policies concerning livestock-associated public health problems in its neighbouring countries in the era of intensive livestock keeping. The dynamics between public health and agriculture seem to have played out very differently in Germany for instance, as indicated by the Dutch thwarting of public health-inspired restrictions on the use of antibiotics in livestock in West-Germany.[90] A comparison between the Netherlands and Denmark, with comparable agricultural sectors, could also provide interesting insights.

87 Oreskes and Conway, *Merchants*.

88 I make this argument in my forthcoming PhD thesis (see note 1).

89 Krajenbrink, *Het Landbouwschap*, chapter 7; Daniël Broersma, *Het Groene Front voorbij* (Groningen, Wageningen 2010).

90 Kirchelle, 'Toxic Confusion', 123.

The salmonellosis case illustrates the value of a problem-oriented approach for the historiography of policy, as it reveals negotiations over the boundaries of policy domains rather than taking such boundaries for granted – as often happens in institution-based histories of policy. Moreover, it shows that the Dutch *PBO* archives deserve more attention, not only because the archives provide rare access to corporate documents, but also because the *PBO*s, as an extra-parliamentary sites of power, affected a much wider area of state policies than is now recognised.

Floor Haalboom (1987) studied history of the sciences and the humanities (MA), Dutch language and culture (BA) and biology (BSc). She is currently finishing her dissertation on dealing with infectious diseases shared by humans and livestock ('zoonotic diseases') in the Netherlands (1898-2001), at the Descartes Centre for the History and Philosophy of the Sciences and the Humanities (Utrecht University) and the Julius Centre for Health Sciences and Primary Care (UMC Utrecht). Her publications include Floor Haalboom, 'Scientists in cowsheds: disputes over hygienic milk production in the Netherlands, 1918-1928', in Eric Jorink, Ilja Nieuwland and Huib Zuidervaart (eds.), *Locations of Knowledge in a Dutch Context* (Leiden, Boston, forthcoming); and Floor Haalboom, '"Spanish" flu and army horses: what historians and biologists can learn from a history of animals with flu during the 1918-1919 influenza pandemic', *Studium: Tijdschrift voor Wetenschaps- en Universiteitsgeschiedenis / Revue d'Histoire des Sciences et des Universités* 7 (2014) 124-139.