Lard, lice, and longevity: a comparative study of the standard of living in occupied Denmark and the Netherlands, 1940-1945
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From Riches to Rags

Within a year after the invasion, great differences became visible in the clothing of our children, also in school playgrounds, where it had not before been visible. Especially in footwear, the divide was evident. Two years later, physical education teachers noted, in the changing rooms, the terrible differences in underwear, stockings and footwear.  

Introduction
Although food supplies in both Denmark and the Netherlands may have been managed relatively effectively through the centralized rationing system, food and agriculture were of course not the only wartime problems. Like foodstuffs and fodder, many industrial raw materials and manufactured goods had been imported from overseas before the war, and many of these consequently became less or completely unavailable after the invasion. Germany, in turn, which was working hard to maximize its industrial output for its massive war effort, set out to curtail civilian consumption in the occupied countries and to exploit their productive capacity and reserves of raw materials. It also laid considerable claims to the labour force of the occupied countries, which also impacted the availability of goods and services. For example, workers who were building German defence works in Jutland or manufacturing grenades in Germany were obviously not available for building or manufacturing for civilian consumption.

As the quotation above illustrates, the low availability of manufactured goods caused a very visible impoverishment in Denmark, as it did in the Netherlands: people went about ever more shabbily dressed, insufficiently housed, often cold and sometimes dirty. Differences in the availability of these goods may well help to explain the marked difference between Dutch and Danish disease environments and mortality rates. Not all civilian consumption, of course, was needed to maintain public health. Fashionable clothing, although nice to have, is hardly one of life’s necessities. Some of the increasingly hard-to-get products, notably tobacco, were a threat to the

142. From: Jørgen Banke, 'Arbejdsforhold og prispolitik' 338.
health of the Danes and the Dutch rather than a benefit. Other products, however, were very helpful to or even indispensable for healthy living. Neither the Danish nor the Dutch climate is particularly welcoming without sufficient heating, clothing and shelter, and a lack of such commodities may well have impeded public health. Moreover, hygiene came under considerable pressure as soap supplies dwindled and textiles became available in only minimal quantities. Children shared beds for want of bed linen, and by the end of the occupation many of them owned only one set of underwear. There is ample reason, then, to investigate and compare the supplies of these non-food goods in the two countries, especially because Dutch historians and doctors have repeatedly emphasized the relation between the declining material standard of living in the Netherlands and the upsurge in infectious disease, not least through the deterioration of hygienic standards it caused.\footnote{143}{Trienekens, \textit{Tussen ons volk en de honger} 389; Klemann, \textit{Nederland} 486; Boerema, \textit{Medische ervaringen} 12.}

If their view is correct and shortages of textiles, fuel and the like did play a significant role in the increase in infectious disease mortality in the Netherlands, then the situation in Denmark must have been significantly better. The quote above, which stems from Denmark, indicates that some problems there at least resembled those in the Netherlands, but only a quantitative comparison can really shed light on the question whether the different pattern of mortality in Denmark compared to that in the Netherlands can be explained by the different availability of consumer goods other than food. In the following subsections, a comparison will be made of the availability of the most important products in order to assess what differences existed between the two countries.

As with food, the investigation into the provision of these goods is made relatively easy by the extensive administrative controls, and hence archival evidence, on the allocation of those goods at the time. Most of the goods that may have played an important role in maintaining public health (as well as some that certainly did not) were rationed in both Denmark and the Netherlands. Rationing of non-food products was, mostly, introduced only after the German invasion, and modelled on the long-prepared controls over food production and consumption. Most products were coupon-rationed, like food, and bureaucratic infrastructures similar to those allocating
Foodstuffs were set up for the management of both the production and the distribution of these goods. In the Danish case, the Direktorat for Vareforsyning established departments for various product groups. In the Netherlands, separate state bureaux (in addition to the central bureau of rationing) were formed to coordinate production.

**Fuel**

During the occupation, fuel supplies were a matter of great concern to both the Danish and the Dutch authorities and controls on the consumption of fuels were consequently relatively rigid. At the time, many people in both countries still relied for both heating and cooking on simple furnaces, which were predominantly fuelled with coal. Cooking on gas was common, however, and some homes were already equipped with central heating, usually also coal-fired. Coal also powered most electricity-generating stations and was the raw material for gasworks. Gasoline and other oil derivatives were also used in industry, and of course to power vehicles, including public transportation. When fuel supplies faltered, cooking, bathing and especially heating came under threat. In both countries, gasoline and diesel shortages soon made huge, balloon-like biogas generators on car roofs a relatively common sight.

The German invasion threatened fuel supplies in especially Denmark, because the country had little or no indigenous fuel production. During the 1930s, it had imported nearly all its fossil fuels from Great Britain. Although the Netherlands produced coal domestically, it was nevertheless in dire straits without imports, particularly because these were necessary for fuel diversification and because oil was sometimes replaced with coal. Germany was understandably reluctant to furnish Denmark with fuel to replace the British imports, and the threat of withholding it was used by Berlin to blackmail unwilling officials into submission. Danish fuel consumption had to be reduced very significantly. The same applied to the coal-producing Netherlands. Being short of fuels itself, Germany was eager to lay claim to

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144. Hansen, *Økonomisk Vækst* 97.
a share of the Dutch coal production. In 1941, German appropriations of coal caused an acute fuel shortage in the Netherlands.\(^{147}\) This was an all the more difficult period because, as explained in Chapter 3, this winter of the occupation period was a relatively severe one. Both the weather and the fuel situation improved after 1941, but fuel shortages again became dramatic during the Hunger winter, when, like food, fuel could no longer be transported to the western Netherlands and Germany again laid claim to a considerable amount of fuels, making it difficult throughout the country to find sufficient fuel. At that point, interiors were ravaged and trees were felled (and, in some instances, wooden holiday homes were broken up), and a variety of alternative fuels, such as manure, were occasionally used.\(^{148}\)

In Denmark no crisis of the severity of the Hunger winter occurred, and the transportation of fuels was never disrupted in the manner that it was in the Netherlands. Nevertheless, fuel shortages were quite grave during the occupation. Denmark was lucky enough to be furnished with some coal by Germany, but without indigenous production to supplement those imports, the country would have faced an acute fuel crisis during the war years. To avoid such problems, Denmark mined its indigenous reserves of lignite and turf. These fuels, which could not be profitably extracted when high-grade coal could readily be imported from Britain, helped the Danes escape a more serious fuel crisis and, not insignificantly, provided tens of thousands with employment. On the other hand, domestically produced lignite and turf was often of poor quality, which had serious consequences for the usefulness of fuel.\(^{149}\) In the Netherlands, too, domestic lignite and turf production was instigated, but on a much smaller scale and with a markedly lower output.\(^{150}\)

During the war years, there was considerably less fuel at the disposal of the Danes and the Dutch than before, and to make matters worse, what was available was not evenly divided. Remarkably, given the relatively fair (or at least income-independent) distribution of foodstuffs and most other products, fuel rationing in both countries blatantly favoured the rich. In both Denmark and the Netherlands, people

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147. B.L.L. Levinsohn, *De kolencrisis van 1941. Een bestuurskundige case study over de beleidsopvattingen van ambtelijk middenkader* (Utrecht 1991); Klemann, *Nederland* 473.
living in larger houses, and especially those with central heating, initially received more fuel than others. In Denmark, this led to widespread fraud, as people falsely claimed to have a centrally heated house in order to receive a higher allotment. The larger rations provided to the inhabitants of large, centrally heated houses were rarely used to heat a house in its entirety, but rather to heat one room well. The relatively wealthy, who inhabited larger homes, were thus favoured by a system of fuel rationing that hardly seems to have been in accordance with the social justice so often preached at the time. The inequality ingrained in the fuel rationing systems of Denmark and the Netherlands is all the more striking when one takes into account that the relatively wealthy also had greater access to fuel provided through the black market.151

Figure 5.1 gives a rough estimate of the legal availability of fuel for domestic use in Denmark and the Netherlands. It is only a rough estimate because, first of all, it is based on the assumption that fuels were of a constant quality, which, as explained below, is not entirely realistic. A second problem is that these data reflect average use per household, thus obscuring the considerable differences in rations, family size and other variables. These are regrettable imperfections, but they are far less problematic than the final and most important one: Denmark and the Netherlands do not have the same climate. Domestic fuel consumption was very predominantly used for heating during winter and hence different winter temperatures matter considerably. Winter temperatures in Denmark are on average 2 degrees Celsius below those in the Netherlands. However, although this is a seemingly modest difference, it did (and indeed does) mean that temperatures below freezing point, which were quite exceptional in the Netherlands, were common in Denmark. Especially in the cold winters of the early 1940s, it meant that Danish households faced weeks of freezing temperatures with low supplies of fuel.

151. LAS KBB, Dombøger passim; Klemann, Nederland 474; See also page ** below.
Figure 5.1: Estimated average fuel rations for heating per household in Denmark and the Netherlands per winter, and average winter temperature

<table>
<thead>
<tr>
<th></th>
<th>NL</th>
<th></th>
<th></th>
<th></th>
<th>DK</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Winter</td>
<td>Fuel in GJ</td>
<td>% of 1937</td>
<td>Av. winter temp.</td>
<td>Fuel in GJ</td>
<td>% of 1937</td>
<td>Av. winter temp.</td>
<td></td>
</tr>
<tr>
<td>1940/41</td>
<td>21,000</td>
<td>97%</td>
<td>0.6</td>
<td>30,000</td>
<td>76%</td>
<td>-3.7</td>
<td></td>
</tr>
<tr>
<td>1941/42</td>
<td>15,000</td>
<td>69%</td>
<td>-0.5</td>
<td>30,000</td>
<td>76%</td>
<td>-3.4</td>
<td></td>
</tr>
<tr>
<td>1942/43</td>
<td>15,000</td>
<td>69%</td>
<td>4.4</td>
<td>22,500</td>
<td>57%</td>
<td>2.1</td>
<td></td>
</tr>
<tr>
<td>1943/44</td>
<td>13,500</td>
<td>62%</td>
<td>3.1</td>
<td>22,500</td>
<td>57%</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>1944/45</td>
<td>2250</td>
<td>10%</td>
<td>5.2</td>
<td>15,000</td>
<td>38%</td>
<td>1.1</td>
<td></td>
</tr>
<tr>
<td>1946/47</td>
<td>16,000</td>
<td>74%</td>
<td>4.6</td>
<td>28,300</td>
<td>72%</td>
<td>1.1</td>
<td></td>
</tr>
<tr>
<td>1947/48</td>
<td>16,500</td>
<td>76%</td>
<td>2.9</td>
<td>30,000</td>
<td>76%</td>
<td>-2.7</td>
<td></td>
</tr>
</tbody>
</table>

Source: Data on fuel taken from: Klemann, Nederland, 475; CBS, maandschriften; DSD Statistisk Årbog, various issues. Climatological data were kindly provided by the Danish Meteorological Institute (DMI) and the Royal Dutch Meteorological Institute (KNMI). KNMI data are available at: www.knmi.nl. Danish temperatures were measured at Copenhagen airport. Dutch temperatures are the average at De Bildt and Flushing (the former is the far north-eastern and the latter the south-western corner of the western urbanized area).

In absolute terms, the Danes were supplied with considerably more fuel than the Dutch were, but relative to their prewar consumption the decline was in fact worse. The difference should be ascribed primarily to climatological differences, although such technical factors as home insulation, income and habits may have played a part in determining normal fuel usage.

The decline in fuel availability was aggravated by the fact that also the quality of fuel declined. Especially Danish turf and lignite were of bad quality. Producing vast quantities of high-grade fuels out of more or less virgin sources and with an inexperienced labour force all too often proved too great a challenge for the Danes. Another important factor was the great sensitivity of especially turf production to...
fraud. Since producers were paid by the weight of their turf production, it was highly attractive to them to tamper with the water content of their product. Similar problems existed in the Netherlands, although not necessarily to the same extent.\textsuperscript{152}

Were Danish fuel supplies significantly better than those in the Netherlands? If one looks purely at the quantities of fuel used, Denmark was better supplied than the Netherlands was. However, when differences in normal use and, especially, the climate are taken into account, the difference is far less great. The Dutch appear to have suffered a particularly dramatic decline in terms of their prewar consumption only in 1944-45. In that same period, Danish fuel supplies were roughly similar to those the Dutch had had to make do with in 1942-43. Because of the similarities between the two countries, and the fact that fuel shortages continued to plague both the Danes and the Dutch after the war had ended, a direct link between fuel shortage and increased mortality seems unlikely.

\textbf{Soap}

Throughout Europe, both the availability and the quality of soap declined dramatically during the war years, and Denmark and the Netherlands were certainly no exception to this. In the mid twentieth century, soap was still very predominantly made with organic fats, and when they became in short supply, soap production inevitably suffered. In so far as fat could be used for the production of either soap or food, moreover, it was generally assigned to food production. Faced with severe shortages of their main raw material, soap manufacturers and the economic authorities sought technical solutions to maintain production. In both countries, the fat content of soap was drastically reduced. Soap bars were labelled ‘80%’, ‘50%’ or even ‘20%’ to designate their fat content; they were also inflated with air, giving them a light, brittle structure. Although this enabled soap producers to turn out a reasonably large quantity of soap, its quality invariably declined as a consequence.\textsuperscript{153}

\textsuperscript{152} Bundgård Christensen et al., \textit{Danmark besat} 210. Fraud in fuel and other industries is discussed in more detail in Chapter 8.

Given the diverse quality (or at least diverse fat content) of various soap products, a comparison based on weight or volume is highly dubious and it is more feasible to initially focus on the total availability of soap fatty acids. A quick glance at the consumption of these acids reveals that while Denmark managed to maintain rations of traditional soap on a low but stable level, Dutch provisions dwindled in the course of the occupation. The relatively large reserves of vegetable fats held by the Dutch soap industry had been exported to Germany immediately after the invasion, and as the war progressed the availability of soap fatty acids declined to spectacular lows. While Denmark could devote small but significant quantities of organic fats to soap manufacturing, the Netherlands could not.\(^\text{154}\)

In the light of the dramatically declining consumption of soap fatty acids, it is hardly surprising that the Dutch Red Cross claimed that soap shortages posed an acute threat to public health.\(^\text{155}\) Its 1945 report *Het nijpende zeepvraagstuk in Nederland* ("The pressing soap question in the Netherlands") spelled out how the availability of soap fatty acids had dwindled to unprecedented lows, threatening the basic hygiene of the Dutch. As can be seen in figure 5.2, the information presented by the Red Cross was not as such incorrect: the availability of soap fatty acids was indeed low and declining. It is a different matter, however, whether this is an accurate depiction of the availability of soap in the Netherlands. Traditional soaps were scarce,.

\(^{154}\) RA, Dv, Beretning 27-6-1942.

but modern industry readily supplied alternatives. In reaction to the much lower availability of traditionally produced soap, alternative products were introduced, mostly for domestic use, based on mersol, which is a by-product of the lignite processing industry. Mersol – an aggressive acid – could be processed only by a few major producers (such as the Dutch industrial giant Unilever) and these products were hardly available in Denmark. As Wubs’ recent history of Unilever in wartime points out, by 1943 organic soaps made up less than 10% of total Dutch soap consumption.156 In other words, by using the consumption of soap fatty acids as a yardstick, the Dutch Red Cross painted a far more dramatic picture than was realistic.

Soap products were rationed in both countries, although extra provisions were made for doctors and those who were doing particularly dirty work. Supplies of soap products for physical cleanliness (mainly soft soaps) could be made available in reasonable quantities, but soft soaps – which were used in house cleaning – were more problematic.157 Domestic cleanliness was increasingly difficult to achieve. Traditional cleaning techniques, such as the use of sand, were reintroduced by Danish and Dutch housewives alike to make up for the loss of other products. To a considerable extent, the effect of soap shortages on domestic cleanliness was cosmetic: sheets, of which there were fewer and fewer anyway, would no longer turn white when laundered.

Danish housewives had to cope with the primitivization of housekeeping brought about by the fact that in Denmark there were far fewer of the synthetic detergents that were in relatively ample supply in the Netherlands.158 They did so by, for example, exchanging knowledge in national societies of housewives, which grew very rapidly during the war and offered extensive courses in modern, efficient housekeeping. The popularity of these activities was considerable and such organizations rapidly expanded. After liberation, these organizations became an example, not least for the Dutch feminist economist W.H. Posthumus van der Goot, who travelled to Denmark within a year after liberation to prepare for the

157. Unilever Historisch Archief, Rotterdam, HA 71 0970.
158. Kjersgaard, *Danmark* 281.
establishment of the Huishoudraad (household council) in the Netherlands, which she launched in 1950. For all their successful organization and camaraderie, however, soap shortages plagued Danish housewives and no level of collective inventiveness could alter that fact.\textsuperscript{159}

When Allied forces rolled into Denmark and the Netherlands, both countries had suffered a prolonged period of soap shortage. People were looking a bit scruffy and the first imported bars of Sunlight soap were hailed as harbingers of renewed cleanliness. But had their health been under threat because of the wartime soap shortages? It seems unlikely. Strangely enough, when the Dutch Red Cross first investigated the urban populations of the newly liberated western Netherlands, it reported that, even so soon after the famine winter, domestic hygiene was excellent in most households. It also commented, not without patriotic glee, that the Canadian troops liberating the Netherlands were impressed with the high standard of cleanliness in the country, adding that ‘the comparison with especially Italy was apparently highly favourable to us Dutch’.\textsuperscript{160}

While domestic hygiene problems do not appear to have been all that great, a deterioration of personal hygiene may have taken place. A lack of soap and hot water (for which, of course, fuel was needed) did impact personal hygiene in both countries, though not necessarily to the same extent. As explained in Chapter 2, because a number of the diseases that affected the Dutch so much more than the Danes are linked to hygiene, declining personal hygiene – and more specifically the decline in hand-washing with soap – might have had an impact on the spread of disease. Two other developments, moreover, may have exacerbated hygienic problems, namely the insufficient availability of textiles and of housing.

**Textiles and shoes**

The textile industry was a global one, and had been since the industrial revolution. Textiles made of imported fibres, notably cotton, had long been the mainstay of most

\textsuperscript{159}. De Danske Husmoderforeninger gennem 25 Aar; IIAV, Archief Posthumus van der Goot; Digitale Biografisch Woordenboek van het Socialisme en de Arbeidersbeweging in Nederland (www.iisg.nl/bwsa).

\textsuperscript{160}. Het Nederlandse Rode Kruis, Het nijpende zeepvraagstuk in Nederland 10.
of Europe's wardrobes. Consequently, the economic isolation of the German-dominated area caused grave and immediate problems to textile supplies. It did so, to begin with, in Germany itself, which not only lacked much of its normal imports but also needed vast quantities of textiles to clothe its army. The sizeable Dutch cotton reserves were confiscated by Germany immediately after the invasion, leaving the Dutch with reserves amounting to a mere 25% of their normal annual consumption. Denmark, on the other hand, imported small amounts of Germany's dearly needed textiles, in exchange for its massive export of agricultural products. Moreover, as an officially independent nation, Denmark could import textiles from such countries as Italy and Switzerland, albeit on a very moderate scale, because it lacked the hard currency to do so. Imports, moreover, consisted to a large extent of inferior artificial fibres rather than cotton and wool. Although the quality of these products was notoriously dismal, they contributed significantly to the Danish textile provision. Without those imports, the situation would have been problematic in the extreme, since the imports of traditional fibres for textile declined by no less than 90% in the early years of the occupation.161

The sharply reduced availability of textiles in Denmark was aggravated by the remarkably late introduction of textile rationing, which was implemented only in 1944. After Italy had largely fallen into Allied hands, imports from that country were terminated, providing a pretext to introduce rationing. According to Jensen, the late introduction of rationing was motivated by the need to obscure the high Danish consumption of textiles, but as in the case of meat and other foodstuffs, it seems rather unlikely that German officials present in Denmark would not have been aware of the textile consumption all around them.162 In any case, the absence of rationing led to a markedly uneven access to textile products, as the quote at the beginning of this chapter illustrates. It was mostly the poor who were affected by textile shortages, not in the least because they could not afford to hoard, even though price controls had been introduced.

In the Netherlands, there certainly was no wealth of textiles to hide from the German authorities, and they were rationed as early as 5 August 1940. Distex (the state bureau responsible for the allocation of textiles) introduced an elaborate points rationing system. Points rationing provided households with a number of points, hence the name, which could be used in the same way as ration coupons.\textsuperscript{163} Points, however, were unspecified and could be used for all kinds of textile products, which were valued at a certain number of points. After 1943, German claims and the faltering availability of raw materials reduced the value of these points to almost nil, but until then, and especially after liberation, the system functioned reasonably well. As the availability of textiles declined, legal purchases of clothing increasingly came to require special permission, based on need. Through this rigid measure, however, clothing could, and was, at least allocated to those who needed it the most, a feat clearly not achieved in Denmark.\textsuperscript{164}

The issue here is not whether there was a shortage of textiles in Denmark and the Netherlands (there is no doubt whatsoever that there was), but whether this shortage was so serious as to have posed a danger to public health, and whether supplies in the two countries can be sensibly compared. These questions are difficult to answer because of the durable nature of textiles. Textiles, like fuel, are necessary to maintain a minimal standard of living, and in the last instance are indispensable to survival in a temperate climate, but it is not at all necessary to frequently acquire new clothes. People can generally hold out quite long with the clothing and bed linen they already own, and hence need not be continuously supplied with textile products. Children grow out of their clothing, and hence need more regular replacements, some of which can of course be provided by recycling cast-offs other children have grown out of. In a period as long as the German occupation of Denmark and the Netherlands, however, textiles inevitably wore out, posing serious problems. Not only do people need clothing to keep warm, but there also is a clear relation between textile provisions and hygiene. When bed linen became so scarce that it had to be

\textsuperscript{163} For a theoretical introduction to points rationing, see Buttersworth, \textit{The Theory of Price Control and Black Markets}.

\textsuperscript{164} Swarttouw, \textit{De textielvoorziening} 421-446; Klemann, \textit{Nederland} 480; Hofstede, Hoitsma and de Jong, \textit{Kleding op de bon} 57.
shared, or when clothing could not be changed and washed regularly, infection risks may well have increased.\textsuperscript{165}

It is difficult to assess and compare the availability of clothing, precisely because textiles are durable and recyclable. The production of especially children's clothing could, in an age in which the majority of women had considerable sewing skills, rely to a large extent on recycling material from old clothing, curtains and the like. Moreover, the total mass of textile in the wardrobes of Denmark and the Netherlands was considerable, so that both countries could potentially hold out for quite a while. Women's magazines of the time gave extensive advice on the remaking of cast-offs into new children's clothing. Professional tailors offered similar services, occasionally making dresses out of mere rags. The skills of tailors proved highly marketable in Denmark and the Netherlands, even when their normal raw materials had mostly become unavailable. For all the success of recycling, however, it was not a strategy that could be resorted to indefinitely. By the end of the five years of occupation, people in Denmark and the Netherlands began to run out of even the most basic textile products. By 1945, the situation was dramatic especially in the Netherlands, where many urban households had had to trade off their textiles in order to purchase foodstuffs during the Hunger winter, further emptying their already depleted wardrobes.\textsuperscript{166}

The shortages of textiles in both countries were further aggravated by the fact that the quality of the available textile products fell far short of prewar standards. Without wool and cotton available in any significant quantities, the production of clothing had to be undertaken with other raw materials. The creativity of producers in the adoption of artificial fibres, paper and various other materials deserves admiration, but their products were very predominantly of an inferior quality. Danish unions calculated that clothes made of artificial fibres were 40-60\% less durable than their prewar versions.\textsuperscript{167} There is little doubt that at this stage of their development, the durability and quality of artificial fibres left much to be desired. Although durable

\textsuperscript{165} Klemann, \textit{Nederland} 483.

\textsuperscript{166} Kruijer, \textit{Hongertochten; van der Zee, The Hunger winter} 75.

\textsuperscript{167} Kjersgaard, \textit{Denmark} 183.
and comfortable synthetic fibres became common in later decades, they were still very much a rarity during the Second World War.

By 1945, as figure 5.3 illustrates, the availability clothing had become nothing short of dramatic in the western Netherlands, at least among children. Similar data on most items of adult clothing are, regrettably, unavailable. The data presented here for each country do not relate to exactly the same age bracket, nor to a necessarily similar income group, but the difference is so striking as to license conclusions. Of all types of clothing, Danish children appear to have had about twice as many sets at their disposal as Dutch children had. The data, on the other hand, are not representative of the Dutch situation throughout the war years, since they stem from May 1945 (just after the Hunger winter) and from western Dutch towns.

The impact of the Hunger winter on the clothing situation is difficult to assess. There are many recorded cases of textile goods being traded for food in the countryside, but it is not clear whether children’s clothing was common tender in such transactions. If it was, then at least some of the clothing these urban children no longer had was in being worn in rural areas by the children whose parents had traded food for clothing. To lessen the potential influence of the Hunger winter on data, only the least affected towns and areas (i.e. Amersfoort, Alkmaar, Delft, Dordrecht, Hilversum and the Zaanstreek) have been selected from the sample.168

**Figure 5.3 Availability of sets of clothing items, per child, Copenhagen and selected Dutch towns, 1945**

<table>
<thead>
<tr>
<th></th>
<th>Copenhagen</th>
<th>Dutch towns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underwear</td>
<td>4.8</td>
<td>1.9</td>
</tr>
<tr>
<td>Overwear</td>
<td>4.0</td>
<td>2.5</td>
</tr>
<tr>
<td>Stockings</td>
<td>5.1</td>
<td>1.6</td>
</tr>
</tbody>
</table>

*Source: RA, Emærings- og husholdningsnævnet Report; Rode Kruis, Onderzoek naar sociale en hygiënische toestanden in het westen des lands. Danish children aged between 1 and 14, working class, living in Copenhagen. Dutch children, aged 1 to 16, all income groups, living in selected western towns.*

After liberation, much less work had to be done in Denmark than in the Netherlands to restock wardrobes. Of course, the Danes too had suffered a decline, and a dramatic decline in terms of quality, but they relatively easily regained an acceptable level of textile ownership. In the Netherlands, on the other hand, especially the last year of the occupation had had a dramatic impact on textile and especially clothing ownership, and restoration consequently took longer. Many of the Dutch children returning from their temporary foster parents in Denmark brought with them considerable quantities of clothes – much to the amazement and relief of their parents. After liberation, moreover, the Danish government’s attitude towards clothing had changed drastically. Bureaucrats within the Direktorat for Vareforsyning, it seems, had been grinding their teeth throughout the occupation period at being unable to intervene in the production and distribution of clothing. By pursuing a rather stringent utility scheme – which forced producers to produce cheap, standardized goods – the Direktorat both forced producers into an efficient use of the available raw materials and kept prices low. In the Netherlands, similar schemes were set up, but these appear to have been executed with much less vigour.

The problems arising from textile shortages were unequally divided. The amount of clothing people own depends not on the availability of clothing at any given moment, but primarily on their incomes and purchasing behaviour over several preceding years. People who are rich, vain or otherwise disposed to buying clothing, may well own, say, three times as many clothing items as a person without those attributes. Moreover, there were enormous quality and price differences in prewar clothing, which reflected not only fashion and style but also long-term durability. Since households came to depend to a very high degree on the amounts and the quality of the textiles they already owned before the German invasion, durability became an important factor. Although several other factors were at play, it was generally the rich who owned the large wardrobes of durable clothes and the poor

169. Sintemaartensdijk, *De bleekneusjes van 1945* 196.
who did not. Consequently, even an equal distribution of newly available textiles led
to a highly unequal distribution of total textiles. Children, on the other hand, gained
relatively little from their parental wealth, because they grew out of their clothing
irrespective of the number of items they owned.

**Figure 5.4: Children’s clothing ownership, per income group, selected western
Dutch towns, 1945**

<table>
<thead>
<tr>
<th>Annual income (Dutch guilders)</th>
<th>Overwear</th>
<th>Underwear</th>
<th>Stockings</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 1400</td>
<td>1.9</td>
<td>1.6</td>
<td>1.1</td>
</tr>
<tr>
<td>1400-1800</td>
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<td>1.5</td>
</tr>
<tr>
<td>1800-3000</td>
<td>2.6</td>
<td>1.9</td>
<td>1.7</td>
</tr>
<tr>
<td>3000-4000</td>
<td>2.2</td>
<td>1.8</td>
<td>1.6</td>
</tr>
<tr>
<td>4000-5000</td>
<td>2.5</td>
<td>1.9</td>
<td>1.6</td>
</tr>
<tr>
<td>&gt; 5000</td>
<td>3.9</td>
<td>2.4</td>
<td>1.8</td>
</tr>
</tbody>
</table>

*Source, Red Cross (see figure 5.3)*

Aware of the clothing shortage among working-class children, both the Danish and
the Dutch authorities set up special schemes to aid low-income households. In
Denmark, access to textiles was enhanced by the issuing of coupons that not only
represented rights to purchase but also had a real monetary value. Poor households
could buy specified textile articles with these coupons. In the Netherlands, the
rationing system was geared towards supplying the poor with more textile goods than
the better-off, as more points were allocated to families with a lower income. This,
of course, was quite a bounty in terms of the potential restocking of wardrobes, but
had the drawback that it also laid greater claims on the budgets of these households.
As explained in Chapters 6 and 7, such claims could not necessarily be met.

**Footwear**

In both Denmark and the Netherlands, the shortage of footwear was even more
problematic than the declining availability of textile products. As said, with the
availability of both sewing skills and sizeable amounts of cloth, the domestic recycling
or remaking of clothing was a feasible way to overcome at least the initial shortage. Footwear, on the other hand, is far more difficult to handcraft and requires the use of high-grade materials such as leather and rubber. Amateurs are unlikely to manufacture shoes very successfully, and the recycling of material is complicated even for professionals. Although the slaughtering of cattle in the two countries ensured a sizeable output of hides and both countries boasted well-developed shoemaking industries, the legal availability of footwear nevertheless declined sharply. Germany required both the Danish and the Dutch shoe manufacturers to produce footwear for Germany, not least soldiers' boots. Thus, while shoe factories were producing at full throttle, shops increasingly remained empty.\footnote{172}{A.J. van der Leeuw, \textit{Huiden en leder 1939-1945} (The Hague 1954); Jensen, \textit{Levevikár} 169.}

Although the situation in Denmark was, as in other regards, slightly better than it was in the Netherlands, it was far from ideal. Very real shortages of footwear existed in Denmark, but shortages primarily led to a dramatic deterioration of the quality of footwear rather than to a sharp decline in the number of pairs. In the course of the occupation, the availability of shoes declined by about 20\% in Denmark, not to mention the sharply lower availability of rubber boots and clogs.\footnote{173}{Kjersgaard \textit{Danmark} 185; RA, \textit{DIV, Beretninger}, notably: 7-1-1943, 26-1-1944.} Paired with the sharply lowered quality of the available footwear, the situation became quite problematic. Matters were complicated further by the fact that footwear, like textiles, was not rationed until 1944. Thus, little can be said about the access people had to the available footwear. When rationing finally was introduced, however, it was implemented with a vengeance. Not only did the Direktorat for Varefosyning take control over the distribution of footwear, but it also intervened to prescribe rather precisely what type of shoes producers were to make. Although some Danish consumers appear to have been less than impressed by the standardized (and allegedly unfashionable) shoes on offer, the Direktorat pressed on and continued to enforce a rigid utility scheme for years following the liberation.\footnote{174}{Jensen, \textit{Levevikár} 227. RA, \textit{DIV, Beretninger}, 1-4-1944.}

In the Netherlands, contrary to the general pattern, the availability of footwear was most problematic during the early years of the occupation, and improved
thereafter. In the course of 1941, the annual domestic consumption of shoes dropped to about one pair for every sixth person, which was clearly insufficient in the longer run. The dramatically low supplies of shoes continued until late 1942, when Dutch officials convinced the German authorities that the Netherlands needed more shoes if a serious crisis was to be averted. For a brief period, more raw materials became available to the Dutch home market and schemes were set up to produce especially children’s shoes. This improvement was short-lived, however, because in the course of 1944 raw materials no longer reached shoe manufacturers in sufficient quantities. Worse still, after the liberation of the south, the northern Netherlands was cut off from the main shoe manufacturing area in the southern province of Brabant, reducing the availability of footwear to almost nil. In addition to the declining availability of shoes, clogs — which had previously been imported from Belgium — were available in only much smaller quantities.175

The quality of footwear plummeted as a consequence of shortages of raw materials, much as had been the case with clothing. Especially in Denmark, a relatively ample supply of shoes came at the expense of quality. Early in the occupation, wooden soles were introduced, and soon the Danes resorted to shoes made of fish skin. Already in 1937, a factory for the processing of fish skin had been founded near Århus. Although ridiculed at the time, fish skin became an important raw material for the Danish shoemaking industry.176 Such innovations obviously helped to supply the Danes with reasonable quantities of shoes, but of very limited durability. Especially fish skin proved to be far from durable in practice. Children, the Direktorat for Vareforsyning reported with some indignation, behaved too carelessly to preserve the fragile material.177 In the Netherlands, quality deterioration appears to have been less extreme than in Denmark. This may well have been due to the fact that the Netherlands had a relatively large indigenous shoemaking industry. Although the bulk of the products of these factories were exported to Germany, the presence of relatively large numbers of experienced shoemakers in all likelihood had a positive

175. Klemann Nederland 484; Hofstede, Hoitsma and de Jong Kleding op de bon 87; van der Leeuw, Huiden en leder.
176. Kjersgaard, Danmark 185.
177. RA, DiV, Beretning 15-07-43.
impact on the quality of shoes, even though much of their produce would have been sold illegally.\textsuperscript{178}

As with clothing, prewar ownership of shoes was one of the main, if not the main determinant of shoe ownership in Denmark and the Netherlands during the occupation. Most people who owned several pairs of high-quality shoes could literally walk through the early years of the occupation without much trouble. Poorer households, even though their incomes tended to increase considerably during the war years, had little opportunity to replace what few pairs they already owned. As was the case with clothing, it was not so much current as past income that was crucial. A further problem, one comparable with those encountered in clothing but much worse, was children's shoes. Unlike clothing, the recycling of shoes was a real option only in so far as sizes were similar. Hence, initiatives on the part of the authorities more often than not concerned children's shoes.\textsuperscript{179} However, they could not prevent the footwear of Danish and Dutch children alike from deteriorating considerably nor, eventually, safeguard Dutch children from having to go barefoot, as happened occasionally in the final phase of the occupation.

Figure 5.5: Average shoe-ownership in Copenhagen and the western Spected Dutch towns, 1945.

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
<th>Children</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copenhagen</td>
<td>No data</td>
<td>No data</td>
<td>2.3</td>
</tr>
<tr>
<td>Selected Dutch towns</td>
<td>2.1</td>
<td>2.2</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Source: RA, DfV Ernærings- og husholdningsnævnet, Report; Rode Kruis, Onderzoek naar sociale en hygienische toestanden in het westen des lands. Danish children aged between 1 and 14, working class, living in Copenhagen. Dutch children aged between 1 and 16, all income groups. See also figure 5.3.

As figure 5.5 shows, shoe ownership among Danish children in 1945 far exceeded

\textsuperscript{178} Klemann, Nederland 485.

\textsuperscript{179} Hofstede, Hoitsma and de Jong Kleding op de bon 62; van der Leeuw, Huiden en leder; RA, DfV, Beretning 7-1-1943, 26-1-1944.
that among their Dutch counterparts. In Amsterdam at least, the shoe provision for children was in fact so dismal that barefoot children had become a common sight by the time of liberation, whereas adults were still mostly provided for. On the other hand, again, these data reflect only the area affected by famine. Since shoes were very valuable on the black market, it is likely that some were sold in order to buy food, and hence that the situation elsewhere in the Netherlands was much better. The lack of extant data, however, precludes an investigation of the state of shoeing outside the western cities.

Housing
Denmark and the Netherlands suffered a severe housing shortage both during and, perhaps especially, after the German occupation. In Denmark, materials and manpower were channelled into the building of the spectacular defence works in Jutland, causing a sharp decline in civilian building activities. The quartering of German troops greatly aggravated what from 1942 had been a severe shortage of housing. The crucial problem, however, was that the lull in building activity coincided with a steadily growing population.\footnote{Hansen Ækonomisk Vækst 104.} The same was true in the Netherlands. In the virtual absence of civilian building activity, there was no way to house a rapidly growing population. The evacuation of coastal areas, including much of The Hague, further aggravated this problem. Bombardments, such as of Rotterdam (1940) and Nijmegen (1944), obviously did not help the housing situation, although the impact thereof on the number of houses available was quite limited, or at least markedly smaller than the ruins suggested.\footnote{Klemann, Nederland 419.}

At the time of liberation, houses in both Denmark and the Netherlands inevitably were more crowded than they had been before the war, and they remained crowded for quite some time thereafter. In the Netherlands, some 120,000 immigrants from the East Indies added to the pressure on the housing market, as did the postwar baby-boom. It is difficult to compare, on the basis of the available statistics, the housing situation in the two countries very effectively. It is in any case unlikely that overcrowding played a very significant role in the deterioration of Dutch
public health: had overcrowding been a driving force behind the increase in infectious disease mortality, then the apparently excellent health of Dutch youths in the immediate postwar years would beg explanation, especially since a highly similar development in Denmark had no such disastrous impact.

The loss of foreign luxuries
There was a flip side to the impact of the Second World War on public health. Many products that were a direct threat to the health of the Danes and the Dutch, notably tobacco, became in short supply, even more so than food, clothing and shelter. Luxury, in the middle of the twentieth century, was in many respects a tropical, or at least decidedly foreign affair. Such products as coffee, tea, tobacco and chocolate were imported from far-away regions in the Americas, Asia and Africa. Many of these goods, which could not be produced in satisfactory quantities in Europe, all but disappeared from Denmark and the Netherlands, much to the dismay of consumers. Only tobacco could be (and was) grown in Denmark and the Netherlands, but the quality, unsurprisingly, was far inferior to what people were used to. Coffee and tea ran out and were soon replaced with surrogate products. The scarcity of tropical consumer goods during the occupation caused the quality of life for many people to deteriorate significantly. Small luxuries – such as smoking – played an important role in the, by modern standards, relatively ascetic life of prewar Dutch and Danish people. To many at the time, such goods made up almost all their expenditure on luxury, and for large parts of the population life without them lost much of its lustre. Apart from that, many people were of course simply addicted to nicotine and caffeine, so that the low rations were a constant irritation. As one, apparently world-wise representative of the Dutch Rijksbureau for tobacco stated, ‘our customers need their tobacco like [an addict needs his snow’ (snow being a euphemism for cocaine).182

In the Netherlands, the availability of alcohol also declined sharply: grain and potatoes were no longer made available for the production of alcoholic beverages, or at least not in any sizeable quantities. Beer was increasingly watered down and distilleries came to a virtual standstill. Only very watery beer continued to be produced. Alcoholism and alcohol-induced violence dropped as a consequence, but

182. NA, Rijksbureau voor tabak en tabaksproducten 4.
that offered little consolation to Dutch drinkers.\textsuperscript{183} In Denmark, in contrast, the production of alcoholic beverages suffered a slight setback in 1940, but thereafter rose to levels far higher than prewar standards. By 1944, alcohol consumption had almost doubled, as apparently the Danes indulged in considerable drunken festivity. The presence of German troops in all likelihood had an impact on increased alcohol consumption, as did the higher incomes of the working classes and the increased employment opportunities for the young. Conservative groups and Christian conservative groups – which included the legendary vicar-cum-poet, Kaj Munk – vigorously campaigned against it, but little could be done to combat the upsurge in alcoholic hedonism that gripped Denmark during the 1940s.\textsuperscript{184}

Even binge drinking, however, could not conceal the fact that many highly prized goods had become almost unavailable in Denmark and the Netherlands alike. Especially coffee and ‘real’ tobacco were dearly missed, as is evidenced by the prices paid on the black market. Worse still, it was particularly these goods that remained relatively hard to get in the post-liberation years. Neither Denmark nor the Netherlands would spend what little international purchasing power they had on such purely luxurious imports. For about a decade, Dutch and Danish consumers were severely restricted in their consumption of some of their favourite luxuries – unless they were willing and able to resort to the black market: tobacco always remained illegally available in considerable quantities, and even coffee could in some cases be had. The costs of course were high, to both consumers and society at large. In Denmark, especially the illegal cigarette trade sparked the rise of widespread organized crime.\textsuperscript{185}

Conclusion
Again, just as in the case of food, Denmark was clearly better off than the Netherlands when it came to many non-food consumables, although the difference was less pronounced. Again, hence, there is ground for considerable suspicion. If the

\textsuperscript{183} P. Arnoldussen and J. Otten, \textit{De borrel is schaars en kaal geworden} (Amsterdam 1994).

\textsuperscript{184} Kjersgaard, \textit{Besættelsen} 254.

\textsuperscript{185} See Chapter 8.
Dutch were in many respects worse endowed that the Danes, it seems plausible enough to ascribe to that the considerable differences between the two countries in public health. Most although certainly not all of the products discussed above were more readily available in Denmark than in the Netherlands. Once again, however, the comparative historian must tread carefully. The differences between the two countries may have been considerable by the time the war ended; for example, although in 1945 barefoot children were no longer exceptional in Amsterdam, it was still an unheard of phenomenon in Copenhagen, but these stark differences arrived relatively late. In the early war years, people in both countries faced considerable discomfort: they were cold, badly clad, wore threadbare shoes and lived in cramped quarters. In neither country, however, was the situation disastrous, nor were the differences particularly great.

As an outcome of the comparative investigation, non-food consumption seems quite as disappointing as nutrition proved to be in the quest for an explanation for the divergent Dutch and Danish wartime mortality. This is especially so because most of the potential explanations related to non-food consumption hardly offer satisfactory explanations for the observed phenomena. In the years after liberation, the availability of clothing and footwear in the Netherlands improved only slowly, and the housing crisis only intensified. The Dutch, as indeed the Danes, remained short of fuel. Yet the impact thereof on public health was only minimal, as explained in Chapter 3. Similar problems arise with the issue of age-specific mortality. It is odd, to say the least, to find that the impact of the lowered consumption of the goods discussed above would have had such a marked impact on public health in the Netherlands, and not at all in Denmark. If soap shortages or bad clothing had such a disastrous impact on the longevity of Dutch children, why is no such effect visible in Denmark at all?

Nevertheless, a few possible building blocks of an explanation may have been identified. After all, there need not be only one explanation for the observed divergence, and nor should the possibility of interaction between economic problems be discarded. There was more to daily life, moreover, than merely the availability of goods. Prices, wages and employment may likewise have had a marked impact. There, too, the economic authorities interfered – and there, too, several suspects still lie hidden.